

APPENDIX A

Inventory and Analysis of Biological Communities in Southern Golden Gate Estates, a Watershed for the Ten Thousand Islands, Collier County, FL

Soils and Vascular Plant Communities

by

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INTRODUCTION

The Southern Golden Gate Estates (SGGE) area in Collier County, FL, is ca. 94 mi² (see Figure 00), primarily made up of hydric prairies and forests. Leighty et al. (1954) indicated the area as largely bald cypress swamp and short grass prairies, with occasional mesic hammocks or flatwoods communities. Significant alterations to the hydrology and biology of the area probably began between 1968 and 1971, when the Faka Union Canal system was completed. This system, and the Golden Gate drainage canals to the west, were designed to drain the surface water from much of central Collier County. This area is the Northern Golden Gate Estates (north of I-75) and the Southern Golden Gate Estates (south of I-75). Four main canals, oriented from north to south, were dredged to make most of the Faka Union tributaries; these (and the connected I-75 borrow canal) funnel into the main Faka Union Canal that discharges directly into Faka Union Bay on the Gulf of Mexico. Since the construction of this drainage and accompanying road system, some of Northern Golden Gate Estates has been converted to residential development; however, very few residences have been established in the SGGE. About 48 miles of canals and about 375 miles of roads were installed in the SGGE proposed development.

Gore (1988) estimated that the Golden Gate and Faka Union drainage canal system drains the Golden Gate Estates area 16 times faster than natural (before canal system) drainage, and has reduced wetland hydroperiods by 2-4 months. The area's water table has been lowered by 2-4 feet. Drainage appears to have affected the wetland communities differently. Many of the prairies and cypress sloughs often have superficial resemblance to the communities described by Leighty et al. (1954); however, species compositions often differ. Many of the areas appear to have changed significantly. Exotic species (mostly Brazilian pepper- *Schinus terebinthifolius*) have become dominant or co-dominant in many areas that formerly were more hydric.

The native sabal palm (*Sabal palmetto*) appears to have become an opportunistic dominant through much of the area during the past few decades. These palms now form dense populations of similar sized, apparently young sabals, beneath widely spaced individuals that appear to be very old. Ages of sabal palms here have been subjectively estimated, as features of their growth do not conform to annual or seasonal events, and ages cannot be accurately determined from their physical characters (Tomlinson, 1984). However, most areas with dense sabal populations do not appear to have had dense sabal palm populations on the aerial photographs taken in 1940 and 1953. This suggests a sparse parent population that has given rise to a successful population of offspring, all at about the same time. The younger palms appear to be 2-3 decades old (again, ages

determined subjectively), suggesting that the population increase may have occurred since the hydrology of the area was changed.

Fires are important ecological factors in many terrestrial communities in southern Florida. Lightning strikes and the occasional fires that result are common, and in the SGGE human mediated fires burn many acres nearly every year. Wade et al. (1980) suggested that that a naturally occurring fire frequency in sawgrass (*Cladium jamaicense*) prairies may be from three to twenty-five years, typically much more frequent than the latter figure. Marl prairies may be expected to burn even more often (Wade, 1980), so that these communities perhaps do not experience fire frequencies greater than before drainage. Other communities, however, may be experiencing fire frequencies different from frequencies before drainage. Flooded cypress sloughs, for example, probably seldom experienced fires, except for the areas adjacent to prairies (Wade, 1980). Fires that occur now may burn closer to, or below the soil surface, as surface water and moisture levels are likely to be lower than levels before drainage. Gore (1988) noted that wild fires in Collier County increased dramatically after completion of the Golden Gate Estates drainage system. The year following its completion, four times as many acres burned as the cumulative total of acres burned during the eight years of drainage canal construction. Furthermore, the mean acreage burned per year exceeded this cumulative total for the following five years. Evidence of these fires is abundant in much of the SGGE area, as charred stumps or fallen trunks of cypress trees. Fires commonly burn farther from prairies or flatwoods into adjacent cypress sloughs or other hydric forest communities. This alters species compositions in communities formerly more hydric, as most resident species are not well adapted to withstand fires (Wade, 1980).

Records of fire occurrence in SGGE have been kept **over the past nine years**. Table 1 below summarizes the frequency of fires during this time at a variety of ecological community types in SGGE. Note that about two-thirds of the sites recorded at least one fire during this time period.

Table 1. Fire Frequencies at Sample Site Locations in SGGE: Numbers of Fires Recorded Within the Past Nine Years.

Number of Fires per Site	Number of Sites Burned
0	8
1	9
2	7
3	3

PURPOSE

The purpose of this document is to provide information about the biological communities in the area, so that comparisons can be made as hydrologic restoration and associated changes continue. Part of this investigation will help to determine the

functioning of existing plant community types, and to offer predictions about the changes in these communities after restoration activities have occurred. This may be especially valuable for upland communities with high habitat value for mammals or other high profile animals.

Changes that are proposed for this area will be monitored to determine whether the differences in plant communities that occur due to the restoration are similar to changes that are anticipated by land managers. Differences in biological communities that are anticipated include increased habitat values for wildlife, improved water quality, decreases in exotic plant populations, and changes in species diversities in various communities. This study will assemble data to describe the current conditions of the communities in this area. The study will also develop diversity measures of habitat assemblages, and use these measures as descriptive tools. These descriptions then can be used for future comparisons to determine whether changes in habitat communities are in line with expectations of land managing entities.

The biological communities are defined and described primarily by their vascular plant residents. The area under study will be compared with descriptions provided by Leighty et al. (1954), in a detailed reconnaissance of Collier County during the 1940s. This survey was done to provide a detailed soils map of the county; this survey included descriptions of the plant communities commonly found on the described soils.

METHODS AND MATERIALS

For the original study area boundary (i.e., before the boundary was expanded in 1999), the SGGE Interagency Technical Committee (ITC) selected 27 sites that represent the major communities in the SGGE area. These sites provide reasonable geographic coverage of the area, and represent many different biological communities that occur here. Focus was on six biological communities that may be affected by the restoration: 1) mesic pine flatwoods, 2) hydric pine flatwoods, 3) cypress slough, 4) hardwood hammock, 5) prairie, and 6) *Schinus*-dominated communities. These communities were selected so that replicate sampling could be done in the same types of communities, and to create sampling representative with sample variability within communities. Sites were located randomly in each of the communities, at least 20 m from the nearest road to minimize disturbances or other effects of roads. Sampling sites were chosen that were within the limits of publicly owned properties. One chosen site was later omitted when maps showed it to be in private ownership.

Six "control" sites were then selected for comparisons with those in the SGGE. These similarly were chosen as representative of the sites chosen for study (above). The exception to this was the community dominated by *Schinus*, as dominance by this exotic may occur in nearly any terrestrial community in our area (Burch 1992, 1997). Mesic and hydric pine flatwoods were located in the Belle Meade area west of SGGE, and cypress slough, hardwood hammock, and prairie sites were located in Fakahatchee Strand

State Preserve, east of SGGE. These areas were selected for comparison as they do not appear to be affected by the drainage system in the SGGE. One chosen site was later omitted when maps showed it to be in private ownership.

In 1999, the study area boundary was extended to the south as described previously in this document to encompass ecosystems downstream of the proposed restored lands in the SGGE. At that point, an additional eight survey sites were chosen on Picayune Strand State Forest lands south of the SGGE. Again, these sites were chosen as representative communities for the area. Communities represented were brackish marsh, freshwater marsh and wet prairie.

Selection of sampling sites in specific habitat types produced a stratified sampling regimen, helping to maximize the information collected in each community (Krebs, 1989). Areas for quadrat sampling within the selected areas were done randomly within a representative part of the community, so that amounts of species encountered will be likely to represent amounts occurring within a theoretical normal distribution. Quadrat sample areas were 10 m X 10 m squares, with two parallel sides oriented north to south. In other studies, 10 m X 10 m plots in scrub habitats contained 48.7% of the total species encountered in the entire communities; doubling these sample areas resulted in about 60% of the total species encountered (Burch, unpublished data).

Community structure and physiognomic variables of quadrats located in representative habitat assemblages will be compared. In each community sampled, aspects of physiognomy and community structure will be measured to investigate whether these variables may be related to differences in hydrology. "Community structure and physiognomic" variables are considered here as amounts of plant cover in tree canopy, shrub canopy, and ground layer, plant species composition.

Comparison With Previous Studies

Two sources of soils information were used to supplement information on each site. The 1954 Detailed- Reconnaissance Soil Survey (Leighty et al., field work finished in 1942, text was rewritten in 1947 and published in 1954), and the modern 1997 Detailed Soil Survey of Collier County (field work finished in 1991) were used to establish concepts about landscapes within SGGE.

The 1954 Detailed-Reconnaissance Soil Survey (Leighty et al., 1954) soil maps (scale 1:40,000) were used to assess historical landscape shape and configuration. The soil maps also were used to gather historical vegetation information. A ground cover classification legend was used by the Soil Survey Party on each soil survey map to supplement map unit lines represented throughout the county and vegetation typically found on most soil types was listed. In addition, the 1940 aerial photographs along with original field sheets were used for clarification. Other aerial photographs (1953) were also used because of better resolution.

The Detailed Soil Survey (Yamataki, 1991) soil maps (scale 1:24,000) were used to focus on areas within the large map units of the 1954 Soil Survey. Large areas within the Golden Gate Estates are represented as Cf, or simply Cypress areas in the 1954 survey, and offer very limited information on soils properties. These and other wetlands soils were considered to have "little true soil" and "given descriptive names, as ... Cypress swamp." These areas were considered impractical to develop for agriculture; therefore, little detail about these systems was provided. The modern soil survey gives more soils information in such areas and also offers the modern soil classification. Map units within this survey also have more precise information about depth of limestone.

The soils description of Collier County (Leighty et al., 1954) included brief outlines of dominant vascular plant species commonly encountered on these soils, and partial lists of these species. The lists are not extensive, but provide a representative sampling of plants in these systems during the time of the soils survey, so that comparisons with current vegetation can be made. The lists commonly have accounted for many grasses; this may reflect the agricultural orientation that is common throughout the survey, as presence and types of graminoids may be important as forage or pasture crops. Wetland plant community descriptions appear to have received as much attention to detail as upland systems in the 1954 soil survey, even though the soils in these areas may have been less thoroughly described.

Descriptive Analysis

At each of the sampling sites, descriptions of the soils and biological communities found have been provided. These include descriptions given by Leighty, et al.(1954), so that general comparisons over time can be made. The following are categories within the site descriptions:

Community type: General classification of the biological community within, and immediately surrounding the sample quadrat area. These descriptions generally follow descriptions of Davis (1943) and Myers and Ewel (1991). Visual estimates of Tree Canopy, Shrub Canopy, and Ground Cover are given as an indicator of community structure of the area within and surrounding the sample quadrat; this is distinct from the quantified cover estimates within quadrats (below, Cover measures), but generally reflects these measures.

Indicators of inundation: Indicators of surface water inundation, such as standing water, lichen lines, cypress knee or buttress heights, and numbers of vascular plant wetland indicator species were noted. Vascular plant wetland indicator species are those used in wetland delineation by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340); plants that are listed as Obligate (OBL) or Facultative (FACW) wetland inhabitants were considered here as wetland indicators. Heights of sabal palm root masses above the surrounding substrate levels were measured so that they

225 could be compared with similar root masses of sabal palms in other hydric/mesic
226 conditions.
227

227 **Community type as interpreted by Leighty et al. (1954):** Synopsis of the
228 biological communities typically occurring on soils beneath the sample quadrat
229 area. This is provided for general comparisons with the current (1997)
230 descriptions of the biological communities in and immediately surrounding the
231 sample quadrat areas.

232
233 **Soil type (Leighty et al., 1954):** Soils classifications given in the 1954 Soil
234 Survey.

235
236 **Current detailed soil descriptions:** Each site has been described by Howard
237 Yamataki, Resource Soil Scientist, USDA Natural Resources Conservation
238 Service. All descriptions were done using standards established and recognized by
239 the National Cooperative Soil Survey Program.

240
241 **Piezometer GPS location:** Piezometers were installed at each sampling site to
242 monitor water table height. All piezometers were established at or near a corner of
243 the sample quadrat area. Global Positioning System locations are provided for
244 each piezometer, so that each can be found in the future.

245
246 **Quadrat location:** Quadrat reference points are recorded so that sample area
247 quadrats can be established at the same locations for subsequent biological
248 community measures.

249
250 **Vascular plant species encountered:** Total numbers of vascular plants recorded
251 within each sample area quadrat are indicated. Each species of vascular plant
252 encountered in the sample area quadrat is listed. Vascular plant wetland indicator
253 species are those used in wetland delineation by the Florida Department of
254 Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340);
255 plants that are listed as Obligate (OBL) or Facultative (FACW) wetland
256 inhabitants are considered here as wetland indicators.

257
258 **Other representative plants near, but not within quadrat:** Other vascular
259 plants that occurred near, but not within, the sample quadrat area, are listed to
260 provide a more complete description of the biological community in which the
261 sample area was located. This list generally contains species found within 10 m of
262 the sample quadrat.

263
264 **Cover measures:** Occurrences of many of the vascular plant species encountered
265 within the quadrat area are quantified by recording the line or "shadow" of plant
266 canopies intercepting four 10 m transects within each quadrat.

267
268 Species occurrences were estimated with a line (or shadow) intercept method,
269 similar to Bendix (1994). Transects randomly selected within each sample area allowed
270 comparisons of variances among sample areas of similar community types (Greig-Smith,

1983). Abundance measures were taken for trees (woody plants >2.0 m), shrubs (woody plants 0.5 m - 2.0 m), and ground cover (herbs or woody plants <0.5 m).

Measures are mean measures (meters) of vascular plants intercepting four randomly selected 10m transects within the 10m X 10m sample quadrat. These measures are expressed as meters per 10 m transect (i.e., meters intercepted); multiplying each mean measure by 10 provides an estimate of percent cover within the quadrat area. This is distinct from the visual percent cover estimates of the community (above, Community type), but generally reflects these estimates.

Anticipated Statistical Analyses

Analyses of habitat communities include measures of physiognomy and community structure, soils and related physical variables (including water levels), and species compositions. These measures will be used in multivariate statistical analyses to identify factors that may be important in influencing the presence of resident species. Multivariate analyses can be used to simultaneously consider many variables and their influences on biological communities. These factors can be used to compute correlation values, and to model the relationships of the communities based on their physical and biological components. If it is determined that the hydrology of the area is a significant factor determining community structure, then predictions based on hydrology can be made with these models.

A major assumption concerning the outcome of restoration in the SGGE is that a change in ground water levels, and concomitant hydrology, will affect the extant habitat communities and resident species. Multivariate statistical analyses will help to determine whether changes take place, and whether differences in water levels (or other variables) have exerted significant influences on these changes. By establishing relationships of these communities based on multiple correlations of community variables, current community correlations can be determined. These relationships may then be compared later to determine the influences produced by each variable.

Factor analysis using a two dimensional representation of variables is recommended. This will produce a graphical representation using two principal component axes to orient community sample sites as a function of data correlations. Water levels at each sample site (as provided by piezometer data) will be included in the suite of variables under consideration, so that the influence of water level change may be considered. The numbers of variables to be considered should be representative but conservative, so that the effects of changes in water levels that are correlated with other differences will be represented. Future comparisons of these analyses may be indicated as differences in community correlations. Graphical representations of these changes should indicate that increasing water levels in historically hydric communities create closer correlations with current hydric communities, and with other hydric communities at the five comparison sites.

316 Biomass Analyses

317

318 A vegetative analysis of the Southern Golden Gates Estates (SGGE) rehydration
319 project area was conducted to provide baseline information so that a before and after
320 restoration evaluation could be made of the area. Plant canopy cover by species was
321 collected at 26 locations within SGGE, along with six additional comparison sites located
322 adjacent to SGGE on the Belle Meade tract and the Fakahatchee Strand State Preserve.
323 Plant canopy cover by species was collected from 10 m² plots established on
324 representative plant communities. Within each 10 m² plot, four random transects ten
325 meters in length were established to collect data on percent plant canopy cover by
326 species.

327

328 The objective of the biomass analysis was to provide an annual productivity
329 parameter in support of the percent plant canopy cover by species information. Our goal
330 was to establish annual biomass production estimates by a clip-harvest technique from
331 1.92 ft² plots located near the 10 m² plots used in the canopy species observations. It is
332 our desire for the biomass information to be an additional feature that, along with the
333 analysis of species composition, will provide useful data in monitoring the rehydration of
334 SGGE.

335

336 After observing the diversity of sites and plant associations included in the overall
337 vegetative analysis of this project, it became apparent that we needed to focus our
338 observation of annual biomass on a subset (one wetland type) of the project area having
339 the least species variability among sites in order to provide more meaningful data in
340 terms of repeatability and statistical validity. It is believed that the *wet prairie* plant
341 communities located on SGGE most closely retain pristine conditions compared to other
342 plant communities located within the project area. Thus, it was determined that the *wet*
343 *prairie* plant communities, in terms of species present and percent canopy cover, would
344 most likely respond the least from the re-establishment of “natural” hydrological
345 conditions and ecological restoration. As a result of this expectation, it seemed
346 appropriate to concentrate our annual biomass data collection on wet prairie sites. The
347 annual biomass productivity information hopefully will yield a sensitive indicator capable
348 of monitoring the subtle changes anticipated on the wet prairie sites during the restoration
349 process.

350

351 In Ecosystems of Florida (1992), Kushlan describes five common freshwater
352 marsh communities in Florida. These freshwater marsh communities include water lily,
353 submersed, cattail, flag, sawgrass, and wet prairie. Wet prairies are described by Kushlan
354 as sites which have a short hydroperiod (50 - 150 days of flooding), high fire frequency
355 (greater than once per decade), and low amounts of organic accumulation (a few
356 centimeters to nonexistent). Wet prairie plant communities are found state-wide and
357 include acid substrate shallow flatwoods marshes and wet savannas of the panhandle
358 region, as well as the periphyton-derived marl substrate sites commonly found in the
359 southern portion of Florida, including those common to SGGE. Although species
360 composition varies greatly depending upon hydroperiod, soils, and site history, dominant

plant species associations identified with the Wet Prairies include maidencane (*Panicum hemitomon*), Tracy's Beakrush (*Rynchospora tracyi*), sawgrass (*Cladium jamaicense*), muhlygrass (*Muhlenbergia filipes*), sand cordgrass (*Spartina bakeri*), white-topped sedge (*Dichromena colorata*), and St. John's-wort (*Hypericum fasciculatum*). Wet prairies are considered to be the most species-rich of Florida's freshwater marsh ecosystems, and include a variety of grasses, sedges, and flowering forbs. Although sawgrass may be present on this site, it is sparsely distributed and of shorter stature than in the sawgrass-dominated freshwater marsh communities.

Wet prairies located at sample sites 9, 13, 14, and 18 were included in the biomass analysis. Sites 9 and 18 are located near the southwest corner of SGGE, while sites 13 and 14 are located at the southeast corner and east central area of SGGE respectively. Leighty, et al. (1954) identified the soils of sites 9, 13, and 14 as Ochopee fine sandy marl, and site 18 as an Ochopee marl, deep phase (see complete site descriptions in the plant canopy cover by species section).

Five 1.92 ft² plots were established along a paced transect that reflected the general characteristics of each of the wet prairie sites. Approximate plant height in inches and green weight in grams of the vegetation by species within 1.92 ft² plots were determined. Green weight by species was ascertained in the field, and air dry weight determined in the office after several days of drying time with use of a Pesola Spring Scale (see Exhibit A).

Average annual production by species was determined in pounds per acre based upon air dry biomass collected. Air dry biomass in grams multiplied by a factor of 50 was used to convert this information to pounds per acre (National Range and Pasture Handbook, Chapter 4, 1997). Annual production figures are shown in Exhibit A.

Three of the four wet prairie locations (sites 9, 13 and 18) were extremely similar in species richness or diversity, and annual biomass. We observed a total of 8, 7, and 6 species (average 7) yielding 4,247, 4,253, and 4,459 pounds per acre (average 4,320 pounds per acre) on sites 9, 13 and 18 respectively. The wet prairie located at site 14, on the other hand, was quite dissimilar to the other locations; there we observed 11 species, yielding 2,292 pounds per acre.

This is to be expected based upon observations made by Burch and Hendricks in examination of plant canopy cover by species and subsequent analysis of the wet prairie located at site 14. During the vegetative analysis of this area, it was characterized as a "prairie that was succeeding to a more tree dominated community." From the species identified in both the percent canopy cover and biomass observations, such as *Andropogon virginicus*, *Andropogon glomeratus*, *Eupatorium capillifolium*, *Eustachys glauca*, *Baccharis halimifolia*, *Lantana camara*, *Solidago* spp., and *Schinus terebinthifolius*, we concluded that natural conditions had been disturbed. We suspect that the preponderance of evidence of an altered hydropattern due to excessive drainage is the principle cause of the stress observed on the wet prairie in this portion of SGGE.

Species expected to be dominant at location 14 appear to be competing for limited resources with species that have invaded on this site. Species richness as determined from the five 1.92 ft² plots collected was 11 species, which is 36 percent higher than that found at the other three wet prairie locations. Biomass was determined at 2,292 pounds per acre, or 47 percent less when compared to the wet prairies located on sites 9, 13, and 18.

In conclusion, the plant biomass analysis will provide an important additional observation for which to detect subtle changes in the plant community as re-hydration and ecosystem restoration take effect. The four wet prairie sites selected for the biomass analysis on SGGE should provide a good measure for monitoring the before and after trends as they pertain to ecosystem restoration of SGGE.

RESULTS AND DISCUSSION

Thirty-one sites were selected for soil, hydrological, and biological analyses. Five of these sites were located at least one mile from the SGGE area, or were considered unaffected by the canal system and drainage in that has occurred there. The biological communities in these sites were similar to the communities in which the sample areas were located in the SGGE. These areas were considered as "control" or comparison sites, as they appear not to have been affected by the Golden Gate drainage canal system. The community types selected for both the treatment area and the comparison areas were: prairie, cypress slough, mixed hardwood slough, hardwood hammock, mesic pine flatwoods, and hydric pine flatwoods; areas with significant Brazilian pepper (*Schinus terebinthifolius*) infestation were also selected to determine whether changes in hydrology may affect this exotic. Table 2 below summarizes sampling site characteristics.

Table 2. Sampling Site Vegetative Community Types

<u>Community Type</u>	<u>Number of Sites</u>
1. prairie	5
2. cypress slough	8, 2 with significant <i>Schinus</i>
3. mixed hardwood slough	3, 2 with significant <i>Schinus</i>
4. hardwood hammock	3, 1 with significant <i>Schinus</i>
5. mesic pine flatwoods	3
6. hydric pine flatwoods	5, 1 with significant <i>Schinus</i>

The communities that now have significant *Schinus* populations are those that may have been most affected by past changes in hydrology. That is, sloughs and hydric flatwoods that are drier may have been susceptible to invasion by *Schinus*. Mesic pine flatwoods do not appear to have been affected by hydrologic changes. Their soils were not hydric, and apparently did not support hydric communities (Leighty et al., 1954), so

that drainage has not affected their community composition. These communities are mostly dominated by a dense saw palmetto understory with slash pines and sabal palms.

Soils and Community Changes

Mesic pine flatwoods were found on Broward fine sand, as indicated by Leighty et al.,(1954), now indicated as Boca, and Immokalee fine sand, as indicated by Leighty (1954), now indicated as Bassinger. These communities appear to be much as described by Leighty (1954), and may be expected to have few wetland indicator residents. However, these areas had more wetland indicators in 1997 than in 1954 (Figure 00). This may be because of small sample size (mesic pine communities: n=3), and greater total numbers of plant residents accounted for in the recent survey.

Hydric pine flatwoods were found on Ochopee fine sandy marl, as indicated by Leighty (1954), now indicated as Malabar, Hallandale, Ochopee, Pineda, or Boca. Three areas were identified as hydric pine woodlands, and all now contain lower percentages of wetland indicators than were listed in the survey by Leighty (1954).

Prairies were most commonly found on Ochopee marl and Ochopee fine sandy marl, as indicated by Leighty (1954), now indicated as Malabar, Hallandale, Ochopee, Pineda, or Boca; prairies were also found on Arzell fine sands, as indicated by Leighty (1954), now indicated as Pineda or Malabar, and Cypress, as indicated by Leighty (1954), now indicated as Hallandale, Boca, Jupiter, or Dania. Prairies occur in areas that appear to have altered hydrology, but their community structures do not appear to have changed much since drainage. Five of the 26 communities are described here as "prairies"; each of these was also described as "Prairie" by Leighty (1954). These areas have remained physiognomically much as they were formerly described, i.e., the community structure is still short grass prairie, but their species compositions have changed.

Forests dominated by cypress trees were found most commonly on cypress soils, as indicated by Leighty (1954), now indicated as Hallandale, Boca, Jupiter, or Dania; cypress dominated forests were also found on Ochopee fine sandy marl, as indicated by Leighty (1954), now indicated as Malabar, Hallandale, Ochopee, Pineda, or Boca. Cypress sloughs appear to have changed at many locations, as understories and ground cover are made up of species more common in mesic situations. Numbers of wetland indicator species in these areas, however, are similar to those found before drainage. Part of this is perhaps because many of the indicator plants in these communities were trees. These long-lived individuals are more likely to persist than many of the herbaceous species common in prairies or other wetlands.

Nearly all hardwood sloughs and hammocks were found on cypress soils, as indicated by Leighty (1954), now indicated as Hallandale, Boca, Jupiter, or Dania; one exception, a nearly monocultural palm hammock, was found on Ochopee fine sandy marl, as indicated by Leighty (1954), now indicated as Hallandale. All had fewer wetland indicator species than described by Leighty (1954). These areas appear to have

496 been hydric cypress and hardwood sloughs that are succeeding to more mesic, hardwood-
497 dominated forests.

498
499 Generally, wetland communities appear to have become less hydric. This is
500 demonstrated in a decrease in wetland indicator species at nearly all sites (Table 00). Of
501 the 26 sites described in the SGGE, 13 of the current descriptions indicate communities
502 that are different from those in Leighty (1954); each of these describes a less hydric
503 situation. All of the comparison sites were described by Leighty (1954), and here, as
504 hydric. One site (Site 32) that previously had been described as a prairie, is now
505 dominated by cypress trees. This community may now be wetter than before, as water
506 here may be impounded by nearby Jane's Scenic Drive.

507
508 Soil Descriptions and Hydric Indicators

509
510 To enhance the standard descriptions, soil series names and sites with hydric
511 indicators are listed in Table 3. A hydric soil indicator is a morphological soil feature,
512 when found near the soil surface, that is evidence of enough saturation to be indicative of
513 a wetland. Soil field indicators are based on Field Indicators of Hydric Soils in the
514 United States, USDA/NRCS in co-operation with the National Technical Committee for
515 Hydric Soils.

516
517

Table 3. Sampling Site Soil Series and Hydric Indicators

<i>Site #</i>	<i>Soil Name</i>	<i>Hydric Indicator by Code</i>
1	Boca	--
2	Pineda	S6
3	Boca	S6
4	Jupiter	A6
5	Malabar	S6
6	Malabar	S6
7	Bassinger	S6
8	(REMOVED FROM DATA SET)	
9	Malabar	F10
10	Malabar	A8
11	Hallandale	--
12	Hallandale	--
13	Ochopee	S6
14	Ochopee	F10
15	Hallandale	--
16	Hallandale	A7
17	Boca	S6
18	Pineda	S4
19	Jupiter	A6
20	Dania	A8
21	Hallandale	S6
22	Hallandale	S6
23	Hallandale	A7
24	Boca	A6
25	Boca	A6
26	Boca	S6
27	Boca	S6
28c	Pineda	S6
29c	(REMOVED FROM DATA SET)	
30c	Dania	A8
31c	Ochopee	A8
32c	Ochopee	A8
33c	Jupiter	A7

The following are excerpts from Field Indicators of Hydric Soils in the United States, USDA/NRCS in co-operation with the National Technical Committee for Hydric Soils (USDA/NRCS, 1996). The Golden Gate Estates area is within the Land Resources Region (LRR) U.

564 **Hydric Soil Indicators for All Soils**

565 "All Soils" refers to soils with any USDA soil texture.

566
567 A5. Stratified Layers. For use in LRRs F, K, L, M, N, O, P, R, S, T, and U; for
568 testing in LRRs V and Z. Several stratified layers starting within the upper 15 cm
569 (6 in.) of the surface. One or more of the layers has value 3 or less with chroma 1
570 or less and/or it is muck, mucky peat, peat, or mucky modified mineral texture.
571 The remaining layers have value 4 or more and chroma 2 or less.

572
573 A6. Organic Bodies. For use in LRRs P, T, U, and Z. Presence of 2% or more
574 organic bodies of muck or a mucky modified mineral texture, approximately 1 to
575 3 cm (0.5 to 1.0 in.) in diameter, starting within 15 cm (6 in.) of the soil surface.

576
577 A7. 5 cm Mucky Mineral. For use in LRRs P, T, U, and Z. A mucky modified
578 mineral surface layer 5 cm (2 in.) or more thick starting within 15 cm (6 in.) of
579 the soil surface.

580
581 A8. Muck Presence. For Use in LRRs U, V, and Z. A layer of muck with value 3
582 or less and chroma 1 or less within 15 cm (6 in.) of the soil surface.

583
584 **Hydric Soil Indicators for Sandy Soils**

585 "Sandy soils" refers to those soils with a USDA texture of loamy fine sand
586 and coarser.

587
588 S4. Sandy Gleyed Matrix. For use in all LRRs except W, X, and Y. A
589 gleyed matrix which occupies 60% or more of a layer starting within 15
590 cm (6 in.) of the soil surface.

591
592 S5. Sandy Redox. For use in all LRRs except V, W, X, and Y. A layer
593 starting within 15 cm (6 in.) of the soil surface at least 10 cm (4 in.) thick
594 that has a matrix with 60% chroma 2 or less with 2% or more distinct or
595 prominent redox concentrations as soft masses and/or pore linings.

596
597 S6. Stripped Matrix. For use in all LRRs except V, W, X, and Y. A layer
598 starting within 15 cm (6 in.) of the soil surface in which iron/manganese
599 oxides and/or organic matter have been stripped from the matrix exposing
600 the primary base color of the soil materials. The stripped areas and
601 translocated oxides and/or organic matter form a diffuse splotchy pattern
602 of two or more colors. The stripped zones are 10% or more of the volume;
603 they are rounded and approximately 1 to 3 cm (0.5 to 1.0 in.) in diameter.

604
605 S7. Dark Surface. For use in LRRs N, P, R, S, T, U, V, and Z. A layer 10
606 cm (4 in.) or more thick starting within the upper 15 cm (6 in.) of the soil
607 surface with a matrix value 3 or less and chroma 1 or less. At least 70% of
608 the visible soil particles must be covered, coated, or similarly masked with

organic material. The matrix color of the layer immediately below the dark layer must have a chroma 2 or less.

Hydric Soil Indicators for Loamy and Clayey Soils

"Loamy and clayey soils" refers to those soils with USDA textures of loamy very fine sand and finer.

F10. Marl. For use in LRR U. A layer of marl with a value 5 or more starting within 10 cm (4 in.) of the soil surface.

Vegetative Communities

Many vegetative communities had appearances similar to those described by Leighty, et al. (1954), but most had species compositions that differed. Numbers of wetland indicator species were lower following drainage at almost all sites (Table 4, Figure 00). For all sites in the SGGE, mean numbers of plant species encountered were slightly higher in 1997 than those listed by Leighty, et al. (1954). Also, mean numbers of wetland plant indicator species were about half those listed in 1954, and only about 20% of these plants listed in 1954 remained in 1997:

Table 4. Numbers of Wetland Indicator Species

<u>Variable</u>	<u>1954</u>	<u>1997</u>	<u>Remaining from 1954 to 1997</u>
Total spp.	28.2	30.1	6.6
Indicator spp.	19.3	10.6	4.2
% Indicator spp.	66.6	36.5	20.2

Numbers of wetland indicator species were lower at sites in the northern part of the study area than in the southern part. This reflects the more hydric nature of the southern parts of the study area, and the more common mesic communities in the north. These differences in relative percentages of indicator species from mesic to hydric sites were consistent from 1954 to 1997 (Figure 00).

Mean amounts of wetland indicator species in SGGE decreased after the area was drained. Percentages of wetland indicator species found at these sites ranged from 52-74% in 1954, to 12-48% in 1997; the difference between the two years is statistically significant. Similarly, percentages of wetland indicator species in 1997 were lower at sites closer to drainage canals. The relationship between percent of wetland indicator species and distance to the nearest drainage canal is significant, but the regression coefficient is not high ($r^2=0.149$). This low regression coefficient indicates much variation in the data, and may occur because a variety of vegetative community types were used for the analysis. These changes in numbers of wetland indicator species appear to have occurred because of changes in hydrology caused by drainage.

Table 5. Vascular Plant Wetland Indicator Species. Species indicative of wetland communities are facultative wetland inhabitants and obligate wetland inhabitants, as listed by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

<u>1954</u>				<u>1997</u>			
SITE	Total Spp.	Number Indic.	Percent Indic.	Total Spp.	Number Indic.	Percent Indic.	
1	13	2	15.4	31	4	12.9	
2	12	9	75.0	23	6	26.1	
3	13	2	15.4	24	10	41.7	
4	32	21	65.6	23	3	13.0	
5	12	9	75.0	26	16	61.5	
6	32	21	65.6	34	13	38.2	
7	28	6	21.4	30	19	63.3	
8	---REMOVED FROM DATA SET---						
9	30	23	76.7	23	14	60.9	
10	30	23	76.7	30	16	53.3	
11	30	23	76.7	34	8	23.5	
12	30	23	76.7	37	7	18.9	
13	30	23	76.7	29	11	37.9	
14	30	23	76.7	36	13	36.1	
15	32	21	65.6	38	5	13.2	
16	32	21	65.6	31	9	29.0	
17	32	21	65.6	28	8	28.6	
18	23	18	78.3	15	8	53.3	
19	32	21	65.6	26	6	23.1	
20	32	21	65.6	25	9	36.0	
21	30	23	76.7	30	8	26.7	
22	30	23	76.7	34	10	29.4	
23	32	21	65.6	24	9	37.5	
24	32	21	65.6	32	7	21.9	
25	32	21	65.6	41	8	19.5	
26	30	23	76.7	34	16	47.1	
27	30	23	76.7	51	14	27.5	
28c	30	23	76.7	40	21	52.5	
29	---REMOVED FROM DATA SET---						
30c	32	21	65.6	43	19	55.9	
31c	30	23	76.7	21	16	76.2	
32c	30	23	76.7	25	11	44.0	
33c	32	21	65.6	26	6	23.1	

703 Figure 1. Percent Vascular Plant Species Wetland Indicators: 1954, 1997; Distance N of
704 the E-W Faka Union Canal. Percentages of wetland indicator species were lower at sites
705 farther north of the east-west Faka Union canal. These differences in percentages of
706 indicator species from mesic (northern) to hydric (southern) sites were fairly consistent
707 from 1954 to 1997. Percentages of indicator species on all sites ranged from 52-74% in
708 1954, to 12-48% in 1997; differences between years is statistically significant.
709

709 Figure 2. Percent Wetland Indicator Vascular Plant Species and Distances from Nearest
710 Drainage Canal. Percentages of wetland indicator vascular plants in 1997 were lower at
711 sites closer to drainage canals. Filled circles are comparison sites that are distant from
712 the Faka Union canal system and are assumed not to be affected by its drainage. The
713 relationship between percent of wetland indicator species and distance to the nearest
714 drainage canal is significant, but not highly correlated ($r^2=0.149$). This may be a
715 reflection of community diversities in this area.
716

716 Figure 3. Percent Wetland Plant Indicator Species and Soil Types: 1954, 1997, and
717 Indicators Remaining in 1997 from 1954. Wetland indicator species have decreased from
718 1954 to 1997. Mean amounts of wetland indicator species at all sites have changed from
719 66.6% in 1954 to 36.5% in 1997, with about 20 of the same indicator species found in
720 1997 as were recorded in 1954. Error bars are \pm one standard error; "n" values indicate
721 the number of sites on each soil type. "Arzell" indicates sites located on these soils, as
722 indicated by Leighty (1954), now indicated as Pineda or Malabar. "Immokalee" indicates
723 sites located on these soils, as indicated by Leighty (1954), now indicated as Bassinger.
724 "Cypress" indicates sites located on these soils, as indicated by Leighty (1954), now
725 indicated as Hallandale, Boca, Jupiter, or Dania. "Ochopee" indicates sites located on
726 Ochopee marl and Ochopee fine sandy marl, as indicated by Leighty (1954), now
727 indicated as Malabar, Hallandale, Ochopee, Pineda, or Boca. "Broward" indicates sites
728 located on these soils, as indicated by Leighty (1954), now indicated as Boca. See Table
729 00 for details on current soil classifications.
730

730 Figure 4. Total Vascular Plant Species, Wetland Indicators and Soil Types, 1997. Mean
731 numbers of plant species, and of these, the mean numbers of wetland indicators,
732 encountered at sample sites on each soil type. Error bars are \pm one standard error; "n"
733 values indicate the number of sites on each soil type.
734

734 Figure 5. Total Vascular Plant Species and Soil Types 1954, 1997, and Species
735 Remaining in 1997 from 1954. Mean numbers of plant species at each sample site, as
736 described by Leighty et al. (1954) and the mean numbers of plant species encountered in
737 1997, with the mean numbers of plant species found in 1997 that were also listed in 1954.
738 This provides an indication of numbers of plant species that have persisted in
739 communities that occur on each soil type. Error bars are \pm one standard error; "n" values
740 indicate the number of sites on each soil type.
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EXHIBIT A: BIOMASS ANALYSES DATA

Height and Mass By Species

Data Collected Near Site #9 Soil Series: Ochopee fine sandy marl
Site: Wet Prairie Soil Temperature: 80 degrees F.
Soil Surface: Dry

Herbaceous biomass data collected from (5) 1.92 square foot plots. Plots located on a transect which began 15 paces north of the test well, where the 1.92 square foot plots were positioned along a south to north transect at every 10 paces.

<u>Plot 1</u>	<u>Height</u>	<u>Green Wt.</u>	<u>Air Dry Wt.</u>
	(inches)	(grams)	(grams)
Cladium jamaicense	21	6.0	2.7
Muhlenbergia capillaris var. filipes	32	400.0	215.2
Rhynchospora pusilla	14	3.5	1.8
Flaveria linearis	18	4.0	1.3
Dicanthelium spp.	12	2.0	1.0
<u>Plot 2</u>			
Cladium jamaicense	29	15.0	6.8
Flaveria linearis	22	26.0	8.1
Dicanthelium spp.	20	11.0	5.5
Paspalum monostachyum	27	18.0	9.1
Panicum tenerum	16	3.0	1.4
Dichromena colorata	19	9.5	3.7

830

831

832 (Site #9 continued)

833

834 **Plot 3** **Height** **Green Wt.** **Air Dry Wt.**

835 (inches) (grams) (grams)

836 **Cladium jamaicense** **24** **49.0** **22.3**

837

838 **Rhynchospora pusilla** **12** **10.0** **5.0**

839

840 **Flaveria linearis** **22** **6.0** **1.9**

841

842 **Dicanthelium spp.** **13** **9.0** **4.5**

843

844 **Paspalum monostachyum** **27** **14.5** **7.4**

845

846 **Dichromena colorata** **18** **5.0** **1.9**

847

848 **Panicum tenerum** **18** **1.0** **0.5**

849

850 **Plot 4**

851

852 **Cladium jamaicense** **22** **21.0** **9.6**

853

854 **Rhynchospora pusilla** **7** **10.0** **5.0**

855

856 **Flaveria linearis** **18** **5.0** **1.6**

857

858 **Paspalum monostachyum** **20** **57.0** **28.9**

859

860 **Dichromena colorata** **21** **9.0** **3.5**

861

862 **Plot 5**

863

864 **Cladium jamaicense** **40** **77.0** **35.0**

865

866 **Rhynchospora pusilla** **13** **6.0** **3.0**

867

868 **Paspalum monostachyum** **24** **75.0** **38.0**

869

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Height and Mass By Species

Data Collected Near Site #13
Site: Wet Prairie

Soil Series: Ochopee fine sandy marl
Soil Temperature: 72 degrees F.
Soil Surface: Dry

Herbaceous biomass data collected from (5) 1.92 square foot plots. Plots located 62 paces east of test well to a cabbage palm, transect line located 10 paces east of this tree. Individual 1.92 square foot plots were positioned along a north to south transect at every 5 paces.

<u>Plot 1</u>	<u>Height</u>	<u>Green Wt.</u>	<u>Air Dry Wt.</u>
	(inches)	(grams)	(grams)
Flaveria linearis	17	3.0	1.8
Cladium jamaicense	30	10.0	6.3
Paspalum monostachyum	27	84.0	44.4
<u>Plot 2</u>			
Cladium jamaicense	24	2.0	1.3
Paspalum monostachyum	27	89.0	47.1
<u>Plot 3</u>			
Dicanthelium spp.	19	5.0	4.5
Ipomoea sagittata	17	T*	T*
Paspalum monostachyum	27	201.5	106.5
Eupatorium mikaniodes	16	1.0	0.3
Schizachyrium rhizomatum	17	9.0	8.5
Cladium jamaicense	**	3.0	1.9
<u>Plot 4</u>			
Cladium jamaicense	27	16.0	10.1
Paspalum monostachyum	24	131.0	69.4

918

919 (Site #13 continued)

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Plot 5	Height	Green Wt.	Air Dry Wt.
	(inches)	(grams)	(grams)

923

Cladium jamaicense	30	19.0	12.0
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Paspalum monostachyum	30	211.0	111.8
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930 * *T=trace amount (<1 gram)*931 ***height measurement not taken*

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Height and Mass By Species

Data Collected Near Site #14
Site: Wet Prairie

Soil Series: Ochopee fine sand marl
Soil Temperature: 72 degrees F.
Soil Surface: Dry

Herbaceous biomass data collected from (5) 1.92 square foot plots. Plots located 40 paces west of test well. Individual 1.92 square foot plots were positioned along a south to north transect at every 5 paces.

<u>Plot 1</u>	<u>Height</u>	<u>Green Wt.</u>	<u>Air Dry Wt.</u>
	(inches)	(grams)	(grams)
Cladium jamaicense	30	21.0	13.2
Paspalum monostachyum	16	30.0	15.9
Andropogon virginicus	8	T*	T*
<u>Plot 2</u>			
Flaveria linearis	22	11.0	6.6
Cladium jamaicense	39	43.0	27.1
Dicanthelium spp.	15	6.0	3.0
Andropogon virginicus	8	T*	T*
Paspalum monostachyum	24	14.0	7.4
<u>Plot 3</u>			
Andropogon glomeratus	23	43.0	40.0
Solidago spp.	12	4.0	1.5
Dicanthelium spp.	10	5.0	2.5
Paspalum monostachyum	11	3.0	1.6
<u>Plot 4</u>			
Solidago spp.	10	9.0	3.4
Andropogon glomeratus	17	16.0	14.9

981				
982	(Site #14 continued)			
983				
984	Plot 4	Height	Green Wt.	Air Dry Wt.
985		(inches)	(grams)	(grams)
986	Flaveria linearis	30	8.0	4.8
987				
988	Cladium jamaicense	22	3.0	1.9
989				
990	Dicanthelium spp.	4	20.0	10.0
991				
992	<u>Plot 5</u>			
993				
994	Flaveria linearis	14	22.0	13.2
995				
996	Eustachys glauca	13	38.0	21.7
997				
998	Paspalum spp.	10	3.0	1.3
999				
1000	Dicanthelium spp.	16	T*	T*
1001				
1002	Andropogon virginicus	12	6.0	3.0
1003				
1004	Panicum tenerum	19	T*	T*
1005				
1006	?? <i>T=trace amount (<1 gram)</i>			
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Height and Mass By Species

Data Collected Near Site #18
Site: Wet Prairie

Soil Series: Ochopee marl, deep phase
Soil Temperature: 72 degrees F.
Soil Surface: Dry

Herbaceous biomass data collected from (5) 1.92 square foot plots. Plots located 40 paces west of test well. Individual 1.92 square foot plots were positioned along south to north transect at every 5 paces.

<u>Plot 1</u>	<u>Height</u>	<u>Green Wt.</u>	<u>Air Dry Wt.</u>
	(inches)	(grams)	(grams)
Cladium jamaicense	32	7.0	4.4
Eragrostis sp.	21	4.0	3.0
Paspalum monostachyum	29	111.0	58.8
Muhlenbergia capillaris var. filipes	35	29.0	16.8
<u>Plot 2</u>			
Cladium jamaicense	36	26.0	16.4
Muhlenbergia capillaris var. filipes	32	131.0	76.0
Schizachyrium rhizomatum	10	1.0	0.9
<u>Plot 3</u>			
Cladium jamaicense	30	341.0	180.7
Paspalum monostachyum	18	3.0	1.9
<u>Plot 4</u>			
Cladium jamaicense	38	33.0	20.1
Paspalum monostachyum	19	41.0	21.7
<u>Plot 5</u>			
Dichromena colorata	15	15.0	9.1
Paspalum monostachyum	21	66.0	35.7
Schizachyrium rhizomatum	15	2.0	1.9

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Biomass - Species per Acre

Data Collected Near Site #9:
Site: Wet Prairie

Plant Species	Plots					Average Pounds/Acre
	1	2	3	4	5	
Cladium jamaicense	135	340	1115	480	1750	764
Muhlenbergia capillaris var. filipes	10,750	0	0	0	0	2,152
Rhynchospora pusilla	90	0	250	250	150	148
Flaveria linearis	65	405	95	80	0	129
Dicanthelium spp.	50	275	225	0	0	110
Paspalum monostachyum	0	455	370	1445	1900	834
Dichromena colorata	0	185	95	175	0	91
Panicum tenerum	0	70	25	0	0	19
					Total	4,247

Data Collected Near Site #13
Site: Wet Prairie

Plant Species	Plots					Average Pounds/Acre
	1	2	3	4	5	
Cladium jamaicense	315	65	95	505	600	316
Flaveria linearis	90	0	0	0	0	18
Ipomoea sagittata	0	T*	0	0	0	T*
Dicanthelium spp.	0	0	225	0	0	45
Paspalum monostachyum	2,220	2,350	5,300	3,470	5,590	3,786
Eupatorium mikanioides	0	0	15	0	0	3
Schizachyrium rhizomatum	0	0	425	0	0	85
					Total	4,253

?? T=trace amount (< 1 gram)

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1107

Biomass - Species per Acre

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1109

1110 Data Collected Near Site #14

1111 Site: Wet Prairie

1112

Plant Species	1	2	Plots		5	Average Pounds/Acre
Cladium jamaicense	660	1355	0	505	0	840
Flaveria linearis	0	330	0	240	660	246
Dicanthelium spp.	0	0	225	0	0	45
Paspalum monostachyum	795	370	80	0	0	249
Paspalum spp.	0	0	0	0	65	13
Dicanthelium spp.	0	150	125	0	T*	55
Andropogon glomeratus	0	0	2,000	745	0	549
Andropogon virginicus	T*	T*	0	0	150	15
Solidago spp.	0	0	75	170	0	63
Eustachys glauca	0	0	0	0	1,085	217
Panicum tenerum	0	0	0	0	T*	T*
					Total	2,292

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1137

1138 Data Collected Near Site #18

1139 Site: Wet Prairie

1140

Plant Species	1	2	Plots		5	Average Pounds/Acre
Cladium jamaicense	220	820	9,035	1,005	0	2,216
Paspalum monostachyum	2,940	0	95	1,085	1,785	1,181
Erogrotis spp.	150	0	0	0	0	30
Muhlenbergia capillaris var. filipes	840	3,800	0	0	0	928
Dichromena spp.	0	0	0	0	455	91
Schizachyrium rhizomatum	0	45	0	0	95	28
					Total	4,459

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* T=trace amount (< 1 gram)

EXHIBIT B: SURVEY SITE DESCRIPTIONS 1997

Site 1. North of 48th Avenue SE, ca. 0.6 km west of Everglades Blvd., south of unnamed road. Twp. 50S, Rng. 27E, Sec. 6.

Date of cover measures: 12 June, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki, S. Durwachter, I. Barnett.

Community type: Mesic pine flatwoods. The tree canopy is mostly slash pine emergent above the dominant saw palmettos. These trees, and occasional sabal palms occur widely apart, so that an open canopy is formed, with about 20% cover. The shrub layer dominates the community with about 90% cover; this is mostly saw palmetto, with occasional small sabal palms. Ground cover is sparse (10-20% cover), consisting mostly of grasses and occasional herbs. Soils are sandy with little organic material, and non-hydric; limestone occurs 4-10" beneath the soil surface. This area appears to have burned within the past five years, but this appears to have been a fairly low, cool fire. No exotic species were noted within, or adjacent to, the quadrat area.

Indicators of inundation: Within the sample quadrat area were two species of vascular plants that are listed as Obligate wetland inhabitants, and one species that is listed as a Facultative wetland inhabitant by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

Community type as interpreted by Leighty et al.(1954): Pine flatwoods. Mesic community dominated by a saw palmetto shrub layer with emergent slash pines and sabal palms.

Soil type (Leighty et al., 1954): Broward fine sand, shallow phase.

Current Detailed Soil Descriptions

Series: Boca

Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs

A - 0 to 4 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; very friable; common fine roots; clear smooth boundary.

E - 4 to 6 inches; gray (10YR 6/1) fine sand; single grained; loose; few fine roots; clear wavy boundary.

Bw1 - 6 to 10 inches; brown (10YR 5/3) fine sand; single grained; loose; 10 - 20% 10YR 6/2 stripped areas within; gradual wavy boundary.

Bw2 - 10 to 20 inches; light yellowish brown (10YR 6/4) fine sand; single grained; loose; few fine faint yellowish brown (10YR 5/6) mottles; abrupt irregular boundary.

IIR - 20 inches; fractured limestone. Depth of rock within the pedon begins about 2 inches from the surface.

Piezometer GPS location:

1208	GPS Coordinates	
1209		
1210	North 2892559.39	East 445083.98
1211		
1212	<u>Quadrat location:</u> The piezometer is established as the <u>northeastern</u> corner of the sample	
1213	quadrat area.	
1214		
1215		
1216	<u>Vascular Plant Species Encountered (Total = 21)</u>	
1217		
1218	<i>Andropogon glomeratus</i>	bushybeard bluestem
1219	FACW	
1220	<i>Andropogon virginicus</i>	broomsedge
1221	FAC	
1222	<i>Dichanthelium</i> sp.	grass
1223	<i>Ilex glabra</i>	gall berry
1224	<i>Lyonia fruticosa</i>	staggerbush
1225	<i>Ilex glabra</i>	gallberry
1226	<i>Lantana camara</i>	lantana
1227	<i>Muhlenbergia capillaris</i>	muhly grass
1228	OBL	
1229	<i>Myrica cerifera</i>	wax myrtle
1230	FAC	
1231	<i>Paspalum monostachyum</i>	gulfcoast paspalum
1232	OBL	
1233	<i>Pentodon pentandrus</i>	--
1234	<i>Piloblephis rigida</i>	penny royal
1235	<i>Pinus elliotii</i>	slash pine
1236	<i>Pityopsis graminifolia</i>	golden aster
1237	<i>Pteridium aquilinum</i>	bracken fern
1238	<i>Rhus copallina</i>	sumac
1239	<i>Sabal palmetto</i>	sabal palm
1240	FAC	
1241	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
1242	FAC	
1243	<i>Serenoa repens</i>	saw palmetto
1244	<i>Tephrosia rugelii</i>	--
1245	<i>Toxicodendron radicans</i>	poison ivy
1246		
1247	<u>Other Representative Plants Near, But not Within Quadrat</u>	
1248		
1249	<i>Boehmeria cylindrica</i>	false nettle
1250	OBL	
1251	<i>Bumelia celastrina</i>	buckthorn
1252	FAC	
1253	<i>Chiococca parviflora</i>	snowberry
1254	<i>Elephantopus alatus</i>	elephant foot
1255	<i>Pterocaulon virgatum</i>	rabbit tobacco
1256	<i>Rhus copallina</i>	sumac
1257	<i>Sisyrinchium solstitiale</i>	blue-eyed grass
1258	<i>Smilax auriculata</i>	greenbriar
1259	<i>Stillingia sylvatica</i>	--
1260	<i>Vaccinium myrsinites</i>	blue berry
1261		

1262
 1263 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 1264 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 1265 randomly selected 10m transects within the sample quadrat.
 1266

1267	<u>Species</u>	<u>Meters intercepted</u>	
1268			
1269	<u>Tree Canopy</u>		Exotics
1270	<i>Lyonia fruticosa</i>	0.66	
1271	<i>Pinus elliotii</i>	<u>4.26</u>	
1272			4.92
1273	<u>Shrubs</u>		
1274	<i>Ilex glabra</i>	0.08	
1275	<i>Lyonia fruticosa</i>	0.16	
1276	<i>Myrica cerifera</i>	0.01	
1277	<i>Sabal palmetto</i>		0.38
1278	<i>Serenoa repens</i>		<u>8.11</u>
1279			8.74
1280	<u>Ground Cover</u>		
1281	<i>Andropogon virginicus</i>	0.33	
1282	<i>Dichanthelium</i> sp.	0.02	
1283	<i>Ilex glabra</i>	0.11	
1284	<i>Lantana camara</i>		0.05
1285	<i>Muhlenbergia capillaris</i>	0.05	
1286	<i>Myrica cerifera</i>	0.05	
1287	<i>Paspalum monostachyum</i>	0.04	
1288	<i>Pentodon pentandrus</i>	0.02	
1289	<i>Piloblephis rigida</i>	0.09	
1290	<i>Pityopsis graminifolia</i>	0.02	
1291	<i>Pterocaulon virgatum</i>	0.02	
1292	<i>Schizachyrium rhizomatum</i>	0.17	
1293	<i>Smilax auriculata</i>	0.01	
1294	<i>Toxicodendron radicans</i>	<u>0.06</u>	
1295			1.04
1296			
1297			
1298			
1299			
1300			
1301			

1301 Site 2. Ca. 300m northwest of the western end of 48th Avenue SE. Twp. 50S, Rng. 27E,
1302 Sec. 2.
1303
1304 Date of cover measures: 25 June, 1997.
1305
1306 Investigators: J. N. Burch, G. Hendricks, H. Yamataki, T. Polizos, S. Polizos.
1307
1308 Community type: Hatrack cypress and prairie. The tree canopy provides a sparse to
1309 moderate (ca. 20%) cover. This canopy is made up of hatrack (dwarf) cypress and slash
1310 pine trees. The cypress trees appear to have been growing here for many years, and the
1311 slash pines appear to be mostly recent recruits into the community. This area is located
1312 near the drainage canal that parallels I-75, and appears to have been affected by this
1313 structure. The area appears formerly to have been a sandy prairie with scattered hatrack
1314 cypress, currently succeeding to a community that is dominated more by slash pine, and
1315 other residents with limited tolerance for seasonal inundation. The shrub layer is sparse,
1316 made up of occasional wax myrtle and small sabal palm or slash pine trees. Ground cover
1317 is nearly complete in unshaded areas to moderately sparse in shade. Blue maidencane
1318 dominates the ground cover, but weedy, invasive species are common. Soils are sandy
1319 with limestone about 42" beneath the surface. No evidence of fire in this area was noted.
1320 Exotic species were common but not dominant in this community; Brazilian pepper and
1321 bahia grass were both noted within the sample quadrat area.
1322
1323 Indicators of inundation: Within the sample quadrat area were two species of vascular
1324 plants that are listed as Obligate wetland inhabitants, and three species that are listed as
1325 Facultative wetland inhabitants by the Florida Department of Environmental Protection
1326 (Hydric Soil Field Indicators, lists for Chapter 62340).
1327
1328 Community type as interpreted by Leighty et al.(1954): The description by Leighty et
1329 al.(1954) suggests an ecotonal area with with characters of prairies and pine flatwoods,
1330 usually dominated by slash pine, or bald cypress where slash pine is not common. The
1331 description of ground cover in these areas suggests a seasonally inundated prairie, partly
1332 dominated by cypress trees.
1333
1334 Soil type (Leighty et al., 1954): Arzell fine sand.
1335
1336 Current Detailed Soil Descriptions
1337
1338 Series: Pineda
1339 Taxonomic Class: Loamy, siliceous, hyperthermic, Arenic Glossaqualfs
1340
1341 A - 0 to 2 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very
1342 friable; there are many uncoated sand grains; clear smooth boundary.
1343 E1 - 2 - 9 inches; mixed very pale brown (10YR 7/3); brown (10YR 5/3) and light gray
1344 (10YR 7/2) fine sand; single grained; loose; the light grayish part is stripping (40%);
1345 common fine and medium roots; gradual wavy; boundary.
1346 E2 - 9 - 30 inches; very light gray (10YR 7/2) fine sand; single grained; loose; abrupt
1347 irregular boundary.
1348 Bt - 30 - 40 inches; gray (10YR 6/1) fine sandy loam; weak fine subangular blocky
1349 structure; friable; there are sandy intrusions from the above horizon; abrupt irregular
1350 boundary.
1351 IIR - 40 inches; fractured limestone. The range is from this depth to about 55 inches.

1352
1353 Piezometer GPS location:
1354
1355 GPS Coordinates
1356
1357 North 2892471.14 East 442887.71
1358
1359
1360 Quadrat location: The piezometer is established as the southwestern corner of the sample
1361 quadrat area.
1362
1363
1364 Vascular Plant Species Encountered (Total = 20)
1365
1366 *Amphicarpum muhlenbergianum* blue maidencane
1367 FACW
1368 *Borreria verticillata* --
1369 *Cladium jamaicense* sawgrass
1370 OBL
1371 *Coreopsis leavenworthii* tickseed
1372 FACW
1373 *Eupatorium capillifolium* dog fennel
1374 FAC
1375 *Hypericum brachyphyllum* --
1376 *Malvastrum corchorifolium* false mallow
1377 *Myrica cerifera* wax myrtle
1378 FAC
1379 *Oxalis* sp. --
1380 *Parthenocissus quinquefolia* Virginia creeper
1381 *Paspalum notatum* bahia grass
1382 *Pinus elliotii* slash pine
1383 FACW
1384 *Rubus trivialis* dewberry
1385 FAC
1386 *Sabal palmetto* sabal palm
1387 FAC
1388 *Schinus terebinthifolius* Brazilian pepper
1389 FAC
1390 *Scoparia dulcis* sweet broom
1391 FAC
1392 *Setaria geniculata* grass
1393 *Smilax auriculata* greenbriar
1394 *Taxodium distichum* bald cypress
1395 OBL
1396 *Vitis munsoniana* muscadine grape
1397
1398 Other Representative Plants Near, But not Within Quadrat
1399
1400 *Axonopus affinis* carpet grass
1401 *Lippia nodiflora* carpetweed
1402 *Pluchea odorata* fleabane
1403 FACW
1404
1405

1406 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 1407 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 1408 randomly selected 10m transects within the sample quadrat.

1409				
1410	<u>Species</u>		<u>Meters intercepted</u>	
1411				
1412	<u>Tree Canopy</u>			Exotics
1413	<i>Pinus elliottii</i>	2.92		
1414	<i>Taxodium distichum</i>		<u>0.40</u>	
1415			3.32	
1416	<u>Shrubs</u>			
1417	<i>Myrica cerifera</i>		0.57	
1418	<i>Pinus elliottii</i>	0.19		
1419	<i>Sabal palmetto</i>		<u>0.33</u>	
1420			1.09	
1421	<u>Ground Cover</u>			
1422	<i>Amphicarpum muhlenbergianum</i>		4.18	
1423	<i>Borreria verticillata</i>	0.32		
1424	<i>Cladium jamaicense</i>		0.16	
1425	<i>Eupatorium capillifolium</i>		0.02	
1426	<i>Parthenocissus quinquefolia</i>	0.04		
1427	<i>Paspalum notatum</i>		0.09	
1428	<i>Rubus trivialis</i>	1.90		
1429	<i>Schinus terebinthifolius</i>		0.04	0.04
1430	<i>Scoparia dulcis</i>		0.02	
1431	<i>Smilax auriculata</i>		0.01	
1432	<i>Vitis munsoniana</i>		<u>0.16</u>	
1433			6.94	0.04
1434				
1435				
1436				
1437				
1438				

1438
1439 Site 3. South side of 68 Ave. SE, ca. 0.5 km west of Miller Blvd. Twp. 50S, Rng. 27E,
1440 Sec. 14.
1441
1442 Date of cover measures: 25 June, 1997
1443
1444 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
1445
1446 Community type: Mesic pine flatwoods. This area was a slash pine and saw palmetto
1447 community that burned about one month before the community analysis was completed.
1448 The tree canopy was dominated by slash pines with occasional sabal palms, producing
1449 about 50% cover. The shrub layer and ground cover were very sparse due to the recent
1450 fire. Early recovery by saw palmetto, graminoids, and occasional vines was apparent, but
1451 did not produce dominant cover at the time of measurement. Occasional dead bald
1452 cypress trees suggests occasional inundation, or former inundation. Soils were sandy with
1453 little organic material; limestone occurred about 14" below the surface. Fire occurred in
1454 this area about one month before analysis. Exotic species were not noted in the area of
1455 the sample quadrat; Brazilian pepper was common near the road.
1456
1457 Indicators of inundation: Within the sample quadrat area was one species of vascular
1458 plant that is listed as an Obligate wetland inhabitant, and six species that are listed as
1459 Facultative wetland inhabitants by the Florida Department of Environmental Protection
1460 (Hydric Soil Field Indicators, lists for Chapter 62340).
1461
1462 Community type as interpreted by Leighty et al.(1954): Pine flatwoods. Mesic
1463 community dominated by a saw palmetto shrub layer with emergent slash pines and sabal
1464 palms.
1465
1466 Soil type (Leighty et al., 1954): Broward fine sand, shallow phase.
1467
1468 Current Detailed Soil Descriptions
1469
1470 Series: Boca
1471 Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs
1472
1473 A - 0 to 2 inches; light brownish gray (10YR 6/1) fine sand; single grained; loose; abrupt
1474 smooth boundary.
1475 E - 2 to 6 inches; mixed pale brown (10YR 6/3) and light gray (10YR 6/1) fine sand;
1476 single grained; loose; the light gray part is stripping (50%); clear wavy boundary.
1477 Bw - 6 to 18 inches; brown (10YR 5/3) fine sand; single grained; loose; abrupt wavy
1478 boundary.
1479 Bt - 18 to 30 inches; grayish brown (10YR 5/2) sandy clay loam; weak fine subangular
1480 blocky structure; friable; common medium distinct yellowish brown (10YR 5/8) mottles;
1481 abrupt irregular boundary.
1482 IIR - 30 inches; fracture limestone. Depth to rock within the pedon begins about 6 inches
1483 from the surface.
1484
1485 Piezometer GPS location:
1486
1487 GPS Coordinates
1488

1489 North 2888203.56 East 442831.87
 1490
 1491
 1492 Quadrat location: The piezometer is established as the northeastern corner of the sample
 1493 quadrat area.
 1494
 1495

1496 Vascular Plant Species Encountered (Total = 15)
 1497

1498	<i>Amphicarpum muhlenbergianum</i>	blue maidencane
1499	FACW	
1500	<i>Dichanthelium</i> sp.	grass
1501	<i>Euphorbia polyphylla</i>	spurge
1502	FACW	
1503	<i>Evolvulus serecius</i>	silky bindweed
1504	FACW	
1505	<i>Hypoxis micrantha</i>	yellow stargrass
1506	FACW	
1507	<i>Paspalum monostachyum</i>	gulfcoast paspalum
1508	OBL	
1509	<i>Pinus elliotii</i>	slash pine
1510	<i>Pluchea odorata</i>	flea bane
1511	FACW	
1512	<i>Sabal palmetto</i>	sabal palm
1513	FAC	
1514	<i>Scoparia dulcis</i>	sweet broom
1515	FAC	
1516	<i>Serenoa repens</i>	saw palmetto
1517	<i>Smilax auriculata</i>	greenbriar
1518	<i>Toxicodendron radicans</i>	poison ivy
1519	<i>Urena lobata</i>	Caesar weed
1520	<i>Vitis munsoniana</i>	muscadine grape

1521
 1522 Other Representative Plants Near, But not Within Quadrat
 1523

1524	<i>Cirsium horridulum</i>	thistle
1525	<i>Elephantopus alatus</i>	elephant foot
1526	<i>Hyptis alata</i>	bush mint
1527	FACW	
1528	<i>Ipomoea sagittata</i>	morning glory
1529	<i>Lachnocaulon anceps</i>	bog buttons
1530	FACW	
1531	<i>Lantana camara</i>	lantana
1532	<i>Malvastrum corchorifolium</i>	false mallow
1533	<i>Parthenocissus quinquefolia</i>	Virginia creeper
1534	<i>Stillingia aquatica</i>	corkwood
1535	OBL	

1536
 1537
 1538 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 1539 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 1540 randomly selected 10m transects within the sample quadrat.
 1541

1542 Species Meters intercepted

1543				
1544	<u>Tree Canopy</u>			Exotics
1545	<i>Pinus elliottii</i>	3.47		
1546	<i>Sabal palmetto</i>		<u>0.27</u>	
1547			3.74	
1548	<u>Shrubs</u>			
1549	<i>Sabal palmetto</i>		0.63	
1550	<i>Serenoa repens</i>		<u>0.46</u>	
1551			1.09	
1552	<u>Ground Cover</u>			
1553	<i>Amphicarpum muhlenbergianum</i>		0.02	
1554	<i>Dichanthelium</i> sp.		0.01	
1555	<i>Euphorbia polyphylla</i>	0.03		
1556	<i>Paspalum monostachyum</i>		0.04	
1557	<i>Sabal palmetto</i>		0.01	
1558	<i>Serenoa repens</i>		0.07	
1559	unk. herb		<u>0.06</u>	
1560			0.25	

1561 Site 4. North of SE 78 Ave., ca. 0.6 Km E of Everglades Blvd. Twp. 50S, Rng. 27E, Sec.
1562 24.
1563
1564 Date of cover measures: 20 May, 1997
1565
1566 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
1567
1568 Community type: Mesic palm and hardwood hammock. This is a densely forested area
1569 dominated by laurel oaks and sabal palms that form a nearly complete to complete
1570 canopy; epiphytes are common on oak branches and sabal trunks. The shrub layer is
1571 sparse, mostly formed by small sabal palms. Ground cover is moderately dense,
1572 dominated by blechnum ferns and occasional herbs. Soil is mostly organics with about 1
1573 cm of surface litter. Fire scars occur on some sabal palms, but appear to be old; fire does
1574 not appear to have affected this area within the past 20 years (however, nearby areas
1575 appear to have recently burned).
1576
1577 Indicators of inundation: Within the sample quadrat area was two species of vascular
1578 plant that are listed as Obligate wetland inhabitants, and one species that is listed as a
1579 Facultative wetland inhabitant by the Florida Department of Environmental Protection
1580 (Hydric Soil Field Indicators, lists for Chapter 62340).
1581
1582 Community type as interpreted by Leighty et al.(1954):
1583 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
1584 epiphytes are common. These areas are nearly level and covered with water all or most of
1585 the year.
1586
1587 Soil type (Leighty et al., 1954): Cypress swamp.
1588
1589 Current Detailed Soil Descriptions
1590
1591 Series: Jupiter
1592 Taxonomic Class: Sandy, siliceous, hyperthermic, Lithic Haplaquolls
1593
1594 A1 - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; single grained; loose; common
1595 black (10 YR 2/1) mucky fine sand bodies, most are less than .5 inches in diameter;
1596 common fine and medium roots; clear smooth boundary.
1597 A2 - 3 to 7 inches; black (10YR 2/1) mucky fine sand; weak fine granular structure; very
1598 friable; common fine and medium roots; abrupt irregular boundary.
1599 IIR - 7 inches; fractured limestone. Depth to rock within the pedon begins about 1 inch
1600 from the surface.
1601
1602 Piezometer GPS location:
1603
1604 GPS Coordinates
1605
1606 North 2886308.36 East 443917.10
1607
1608
1609 Quadrat location: The piezometer is established as the Southwestern corner of the sample
1610 quadrat area.
1611
1612

1613	<u>Vascular Plant Species Encountered (Total = 23)</u>	
1614		
1615	<i>Apios americana</i>	groundnut
1616	<i>Blechnum serrulatum</i>	blechnum fern
1617	FACW	
1618	<i>Callicarpa americana</i>	beauty berry
1619	<i>Campyloneurum phylitidis</i>	strap fern
1620	<i>Cynanchum scoparium</i>	--
1621	<i>Dichanthelium</i> sp.	grass
1622	<i>Itea virginica</i>	Virginia willow
1623	OBL	
1624	<i>Parthenocissus quinquefolia</i>	Virginia creeper
1625	<i>Persea borbonia</i>	red bay
1626	<i>Phlebodium aureum</i>	golden serpent fern
1627	<i>Psychotria nervosa</i>	wild coffee
1628	FAC	
1629	<i>Psychotria sulzneri</i>	wild coffee
1630	FAC	
1631	<i>Pteridium aquilinum</i>	bracken fern
1632	<i>Quercus laurifolia</i>	laurel oak
1633	FACW	
1634	<i>Rapanea punctata</i>	myrsine
1635	FAC	
1636	<i>Sabal palmetto</i>	sabal palm
1637	FAC	
1638	<i>Serenoa repens</i>	saw palmetto
1639	<i>Smilax auriculata</i>	greenbriar
1640	<i>Tillandsia setacea</i>	air plant
1641	<i>Tillandsia usneoides</i>	air plant
1642	<i>Toxicodendron radicans</i>	poison ivy
1643	<i>Vitis munsoniana</i>	muscadine grape
1644	<i>Vittaria lineata</i>	shoestring fern

1645
1646

1647 Other Representative Plants Near, But not Within Quadrat

1648

1649 None noted.

1650

1651 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
1652 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
1653 randomly selected 10m transects within the sample quadrat. The category Epiphytes
1654 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
1655 ground, but contribute to the tree or shrub canopy layers.

1656

1657 Species Meters intercepted

1658

1659 Tree Canopy Exotics

1660 *Quercus laurifolia* 8.66

1661 *Sabal palmetto* 7.26

1662 15.92

1663

1664 Shrubs

1665 *Callicarpa americana* 0.05

1666 *Persea borbonia* 0.08

1667	<i>Rapanea punctata</i>	0.15	
1668	<i>Sabal palmetto</i>		<u>2.96</u>
1669			3.24
1670	<u>Epiphytes</u>		
1671	<i>Apios americana</i>	0.28	
1672	<i>Phlebodium aureum</i>	0.23	
1673	<i>Vittaria lineata</i>	<u>0.05</u>	
1674			0.56
1675	<u>Ground Cover</u>		
1676	<i>Blechnum serrulatum</i>	5.01	
1677	<i>Callicarpa americana</i>	0.10	
1678	<i>Cynanchum scoparium</i>		0.04
1679	<i>Itea virginica</i>	0.05	
1680	<i>Psychotria nervosa</i>	0.16	
1681	<i>Psychotria sulzneri</i>	0.05	
1682	<i>Pteridium aquilinum</i>	0.05	
1683	<i>Rapanea punctata</i>	0.01	
1684	<i>Sabal palmetto</i>		0.35
1685	<i>Smilax auriculata</i>	0.04	
1686	<i>Tillandsia setacea</i>	0.01	
1687	<i>Toxicodendron radicans</i>	0.51	
1688	<i>Vitis munsoniana</i>	<u>0.08</u>	
1689			6.48
1690			
1691			
1692			
1693			
1694			
1695			
1696			
1697			
1698			
1699			
1700			

Site 5. North of 110 Ave. SE, ca. 250m east of Miller Blvd. Twp. 51S, Rng. 27E, Sec. 12.

Date of cover measures: 16 July, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Sand prairie; disturbed cypress slough. This area appears to have previously supported a cypress slough, but now is dominated by grasses and herbaceous ground cover. Many burned and fallen cypress trees occur throughout the area, and occasional stressed cypress trees may be found. The community appears to have become dehydrated in the past several years, with subsequent fires producing further stress. Occasional sabal palms create a very sparse tree canopy(<10%); occasional buttonbush and Carolina willow produce a very sparse (<10%) shrub layer. Ground cover is moderately dense, consisting of grasses and herbs; many of these are commonly found in wetlands, so that these may represent remnants of formerly hydric conditions. Soils are sandy with little organic material. Fire occurred in this area about six months before the community analysis was completed. Exotic species generally were not common in the area; *Lippia nodiflora* was a common, but not dominant, component of the ground cover.

Indicators of inundation: Within the sample quadrat area were five species of vascular plants that are listed as Obligate wetland inhabitants, and seven species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). Ground cover is moderately dense, consisting of grasses and herbs; many of these are commonly found in wetlands, so that these may represent remnants of formerly hydric conditions.

Community type as interpreted by Leighty et al.(1954): The description by Leighty et al.(1954) suggests an ecotonal area with with characters of prairies and pine flatwoods, usually dominated by slash pine, or bald cypress where slash pine is not common. The description of ground cover in these areas suggests a seasonally inundated prairie, that was partly dominated by cypress trees.

Soil type (Leighty et al., 1954): Arzell fine sand.

Current Detailed Soil Descriptions

Series: Malabar

Taxonomic Class: Loamy, siliceous, hyperthermic, Grossarenic Ochraqualfs

A - 0 to 4 inches; dark gray (10YR 4/1) fine sand; single grained; loose; many uncoated sand grains; common fine roots; clear wavy boundary.

E - 4 to 14 inches; mixed brown (10YR 5/3), grayish brown (10YR 5/2), and gray (10YR 5/1) fine sand; single grained; loose; the grayish brown (20%) and gray (10%) part are stripping; few fine roots; gradual wavyboundary.

Bw - 14 to 50 inches; pale brown (10YR 6/3) fine sand; single grained; loose; clear wavy boundary.

Bt - 50 to 60 inches; gray (10YR 5/1) fine sandy loam; weak fine subangular blocky structure; very friable; abrupt irregular boundary.

IIR - 60 inches; fractured limestone. Depth of rock is greater than 40 inches.

1751	<u>Piezometer GPS location:</u>	
1752		
1753	GPS Coordinates	
1754		
1755	North 2879844.11	East 443691.76
1756		
1757		
1758	<u>Quadrat location:</u> The piezometer is established as the <u>southwestern</u> corner of the sample	
1759	quadrat area.	
1760		
1761		
1762	<u>Vascular Plant Species Encountered (Total = 20)</u>	
1763		
1764		
1765	<i>Andropogon glomeratus</i>	bushybeard bluestem
1766	FACW	
1767	<i>Blechnum serrulatum</i>	blechnum fern
1768	FACW	
1769	<i>Cephalanthus occidentalis</i>	button bush
1770	OBL	
1771	<i>Cladium jamaicense</i>	sawgrass
1772	OBL	
1773	<i>Conoclinium coelestinum</i>	mist flower
1774	FAC	
1775	<i>Dichanthelium</i> sp.	grass
1776	<i>Eupatorium capillifolium</i>	dog fennel
1777	FAC	
1778	<i>Eupatorium mikanioides</i>	semaphore eupatorium
1779	FACW	
1780	<i>Eustachys glauca</i>	grass
1781	FACW	
1782	<i>Hyptis alata</i>	bush mint
1783	FACW	
1784	<i>Lippia nodiflora</i>	carpetweed
1785	<i>Lythrum alatum</i>	loosestrife
1786	OBL	
1787	<i>Mikania cordifolia</i>	--
1788	<i>Physalis viscosa</i>	ground cherry
1789	<i>Pluchea odorata</i>	fleabane
1790	FACW	
1791	<i>Sacciolepis striata</i>	cupscale
1792	OBL	
1793	<i>Salix caroliniana</i>	willow
1794	OBL	
1795	<i>Setaria geniculata</i>	grass
1796	FAC	
1797	<i>Solidago</i> sp.	goldenrod
1798	<i>Teucrium canadense</i>	germander
1799	FACW	
1800		
1801		
1802	<u>Other Representative Plants Near, But not Within Quadrat</u>	
1803		
1804	<i>Bumelia celastrina</i>	buckthorn

1805	FAC			
1806	<i>Diodia virginiana</i>		button weed	
1807	FACW			
1808	<i>Ludwigia alata</i>		--	
1809	OBL			
1810	<i>Paspalum ciliatifolium</i>		grass	
1811	FAC			
1812	<i>Taxodium distichum</i>		bald cypress	
1813	OBL			
1814	<i>Woodwardia virginica</i>		chain fern	
1815	FACW			
1816				
1817				
1818	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X			
1819	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four			
1820	randomly selected 10m transects within the sample quadrat.			
1821				
1822	<u>Species</u>		<u>Meters intercepted</u>	
1823				
1824	<u>Tree Canopy</u>			Exotics
1825				
1826	<u>Shrubs</u>			
1827	<i>Cephalanthus occidentalis</i>	<u>0.93</u>		
1828			0.93	
1829	<u>Ground Cover</u>			
1830				
1831	<i>Andropogon glomeratus</i>		0.27	
1832	<i>Blechnum serrulatum</i>		0.09	
1833	<i>Cephalanthus occidentalis</i>	0.97		
1834	<i>Cladium jamaicense</i>		0.18	
1835	<i>Conoclinium coelestinum</i>		0.35	
1836	<i>Dichanthelium</i> sp.		0.01	
1837	<i>Eupatorium capillifolium</i>		0.37	
1838	<i>Eupatorium mikanioides</i>		0.19	
1839	<i>Eustachys glauca</i>		0.07	
1840	<i>Hyptis alata</i>		0.02	
1841	<i>Lippia nodiflora</i>		0.19	0.19
1842	<i>Lythrum alatum</i>		0.28	
1843	<i>Mikania cordifolia</i>		0.04	
1844	<i>Physalis viscosa</i>		0.23	
1845	<i>Pluchea odorata</i>		0.05	
1846	<i>Sacciolepis striata</i>		2.87	
1847	<i>Setaria geniculata</i>		0.01	
1848	<i>Solidago</i> sp.		0.16	
1849	<i>Teucrium canadense</i>	<u>0.09</u>		
1850			6.44	0.19
1851				
1852				
1853				

Site 6. 100m southwest of the western end of 114 Ave. SE. Twp. 51S, Rng. 27E, Sec. 14.

Date of cover measures: 15 July, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Cypress and prairie ecotone. This area is a community that is transitional between cypress with prairie components, and a hydric pine woodland. Many of the slash pine trees in this area appear to be young, so that this recent recruitment may be due to a change in hydrology.

The tree canopy is mostly bald cypress covering about 50% of the community. The shrub layer is sparse, typically little more than an occasional small cypress or dahoon holly. Ground cover is moderate (50% cover), consisting mostly of graminoids. Soils are sandy with one cm or more of organic material on the surface. No evidence of fire was noted in this area. Exotic species were not noted in the quadrat sample area; however, one large *Syzygium* tree was noted within 50 m of the area.

Indicators of inundation: Within the sample quadrat area were seven species of vascular plants that are listed as Obligate wetland inhabitants, and four species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

Community type as interpreted by Leighty et al.(1954):

Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines; epiphytes are common. These areas are nearly level and covered with water all or most of the year.

Soil type (Leighty et al., 1954): Cypress swamp.

Current Detailed Soil Descriptions

Series: Malabar

Taxonomic Class: Loamy, siliceous, hyperthermic, Grossarenic Ochraqualfs

A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; there are many uncoated sand grains; clear smooth boundary.

E1 - 3 to 12 inches; mixed very pale brown (10YR 7/3), light gray (10YR 7/2), and brown (10YR 5/3) fine sand; single grained; loose; the light gray (20%) is stripping and the brown (20%) is staining along root channels; there are common fine and medium roots; gradual wavy boundary.

E2 - 12 to 40 inches; very pale brown (10YR 7/3) fine sand; single grained; loose; common medium roots; clear wavy boundary.

E3 - 40 to 50 inches; brown (10YR 5/3) fine sand; single grained; loose; clear wavy boundary.

Bt - 50 to 65 inches; gray (10YR 5/1) fine sandy loam; weak fine subangular blocky structure; very friable; abrupt irregular boundary.

IIR - 65 inches; fractured limestone. Depth of rock is greater than 40 inches.

Piezometer GPS location:

1904	GPS Coordinates	
1905		
1906	North 2878900.33	East 442722.62
1907		
1908		
1909		
1910		
1911	<u>Quadrat location:</u> The piezometer is established as the <u>northeastern</u> corner of the sample	
1912	quadrat area.	
1913		
1914		
1915	<u>Vascular Plant Species Encountered (Total = 25)</u>	
1916		
1917	<i>Amphicarpum muhlenbergianum</i>	blue maidencane
1918	FACW	
1919	<i>Borreria verticillata</i>	--
1920	<i>Cephalanthus occidentalis</i>	button bush
1921	OBL	
1922	<i>Cladium jamaicense</i>	sawgrass
1923	OBL	
1924	<i>Dichanthelium</i> sp.	grass
1925	<i>Dichondra carolinensis</i>	pony foot
1926	FAC	
1927	<i>Eryngium balduinii</i>	snakeroot
1928	FAC	
1929	<i>Eupatorium capillifolium</i>	dog fennel
1930	FAC	
1931	<i>Heliotropium polyphyllum</i>	pineland heliotrope
1932	<i>Hypericum brachyphyllum</i>	--
1933	<i>Hyptis alata</i>	bush mint
1934	FACW	
1935	<i>Ilex cassine</i>	dahoon holly
1936	OBL	
1937	<i>Ipomoea sagittata</i>	morning glory
1938	<i>Mikania scandens</i>	white vine
1939	<i>Myrica cerifera</i>	wax myrtle
1940	FAC	
1941	<i>Panicum hemitomon</i>	maiden cane
1942	OBL	
1943	<i>Paspalum monostachyum</i>	gulfcoast paspalum
1944	OBL	
1945	<i>Pinus elliotii</i>	slash pine
1946	FACW	
1947	<i>Pluchea odorata</i>	fleabane
1948	FACW	
1949	<i>Rapanea punctata</i>	myrsine
1950	FAC	
1951	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
1952	FAC	
1953	<i>Stillingia aquatica</i>	corkwood
1954	OBL	
1955	<i>Taxodium distichum</i>	bald cypress
1956	OBL	
1957	<i>Tillandsia balbisiana</i>	air plant

1958	<i>Tillandsia fasciculata</i>	air plant	
1959			
1960			
1961			
1962	<u>Other Representative Plants Near, But not Within Quadrat</u>		
1963			
1964	<i>Berchemia scandens</i>	rattan vine	
1965	<i>Blechnum serrulatum</i>	blechnum fern	
1966	FACW		
1967	<i>Boehmeria cylindrica</i>	false nettle	
1968	OBL		
1969	<i>Cassytha filiformis</i>	love vine	
1970	<i>Phlebodium aureum</i>	golden serpent fern	
1971	<i>Sabal palmetto</i>	sabal palm	
1972	FAC		
1973	<i>Setaria geniculata</i>	grass	
1974	FAC		
1975	<i>Smilax auriculata</i>	greenbriar	
1976	<i>Syzygium</i> sp.	--	
1977			
1978	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
1979	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
1980	randomly selected 10m transects within the sample quadrat. The category <u>Epiphytes</u>		
1981	includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the		
1982	ground, but contribute to the tree or shrub canopy layers.		
1983			
1984	<u>Species</u>		<u>Meters intercepted</u>
1985			
1986	<u>Tree Canopy</u>		Exotics
1987	<i>Pinus elliottii</i>	0.60	
1988	<i>Taxodium distichum</i>	<u>7.09</u>	
1989			7.69
1990	<u>Shrubs</u>		
1991	<i>Myrica cerifera</i>	0.55	
1992	<i>Stillingia aquatica</i>	<u>0.01</u>	
1993			0.56
1994	<u>Epiphytes</u>		
1995	<i>Tillandsia fasciculata</i>	<u>0.09</u>	
1996			0.09
1997	<u>Ground Cover</u>		
1998	<i>Amphicarpum muhlenbergianum</i>	2.92	
1999	<i>Cladium jamaicense</i>	0.36	
2000	<i>Dichanthelium</i> sp.	0.02	
2001	<i>Eupatorium capillifolium</i>	0.29	
2002	<i>Heliotropium polyphyllum</i>	0.01	
2003	<i>Hypericum brachyphyllum</i>	0.03	
2004	<i>Ipomoea sagittata</i>	0.02	
2005	<i>Mikania scandens</i>	0.02	
2006	<i>Panicum hemitomon</i>	0.04	
2007	<i>Paspalum monostachyum</i>	0.18	
2008	<i>Pinus elliottii</i>	0.01	
2009	<i>Pluchea odorata</i>	0.03	
2010	<i>Schizachyrium rhizomatum</i>	<u>0.01</u>	
2011			3.94

2012
2013
2014

2014 Site 7. 50 m east of Miller Blvd., ca. 100 m south of 116 Ave. SE. Twp. 51S, Rng. 27E,
 2015 Sec. 13.
 2016
 2017 Date of cover measures: 15 July, 1997.
 2018
 2019 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 2020
 2021 Community type: Palmetto flatwoods. This area is a flatwoods community that is mostly
 2022 dominated by saw palmetto. Slash pine trees form a sparse tree canopy within the saw
 2023 palmetto thicket, becoming more common in the peripheral areas, where pine-dominated
 2024 flatwoods occur. Saw palmettos provide a nearly complete shrub layer; many of the
 2025 resident species are common to mesic or xeric habitats. Open prairie covers about 20% of
 2026 the area; about two thirds of the sample quadrat area occurs in the open prairie area. The
 2027 prairie is dominated by graminoids and herbs, many of which are commonly found in
 2028 wetland communities. Ground cover is nearly complete in these prairie areas, and
 2029 generally sparse beneath the shrub layer. Soils are sandy with no rocks near the surface,
 2030 and about one cm organic detritus on the surface. Fire appears to have occurred here
 2031 within the past three to five years. No exotics were noted on the site, but Brazilian pepper
 2032 was common along the road.
 2033
 2034
 2035 Indicators of inundation: Within the sample quadrat area were four species of vascular
 2036 plants that are listed as Obligate wetland inhabitants, and 11 species that are listed as
 2037 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 2038 (Hydric Soil Field Indicators, lists for Chapter 62340).
 2039
 2040 Community type as interpreted by Leighty et al.(1954): Ecotonal area with aspects of
 2041 mesic pine and saw palmetto flatwoods, with cypress swamp.
 2042
 2043 Soil type (Leighty et al., 1954): Immokalee fine sand.
 2044
 2045 Current Detailed Soil Descriptions
 2046
 2047 Series: Basinger
 2048 Taxonomic Class: Siliceous, hyperthermic Spodic Psammaquents
 2049
 2050 A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very
 2051 friable; there are many uncoated sand grains; there are common fine roots; clear smooth
 2052 boundary.
 2053 E1 - 3 to 12 inches; mixed very pale brown (10YR 7/3), light gray (10YR 7/1), and
 2054 brown (10YR 5/3) fine sand; single grained; loose; there are common fine and medium
 2055 roots; clear wavy boundary.
 2056 E2 - 12 to 18 inches; light gray (10YR 7/1) fine sand; single grained; loose; clear wavy
 2057 boundary.
 2058 E3 - 18 to 28 inches; pale brown (10YR 6/3) fine sand; single grained; loose; clear wavy
 2059 boundary.
 2060 Bh&C - 31 to 60 inches; mixed brown (10YR 4/3) and very dark brown fine sand; single
 2061 grained; loose.
 2062
 2063 Piezometer GPS location:
 2064

2065	GPS Coordinates	
2066		
2067	North 2878473.47	East 443436.03
2068		
2069		
2070	<u>Quadrat location:</u> The piezometer is established as the <u>southwestern</u> corner of the sample	
2071	quadrat area.	
2072		
2073		
2074	<u>Vascular Plant Species Encountered (Total = 22)</u>	
2075		
2076	<i>Andropogon virginicus</i>	broomsedge
2077	FAC	
2078	<i>Dichanthelium</i> sp.	grass
2079	<i>Elyonurus tripsacoides</i>	grass
2080	FACW	
2081	<i>Erianthus giganteus</i>	plumegrass
2082	OBL	
2083	<i>Eupatorium mikanioides</i>	semaphore eupatorium
2084	FACW	
2085	<i>Eupatorium leucolepis</i>	--
2086	FACW	
2087	<i>Hypericum tetrapetalum</i>	--
2088	FAC	
2089	<i>Hyptis alata</i>	bush mint
2090	FACW	
2091	<i>Ilex glabra</i>	gallberry
2092	<i>Lachnanthes caroliniana</i>	bloodroot
2093	FAC	
2094	<i>Lachnocaulon anceps</i>	bog buttons
2095	FACW	
2096	<i>Mitreola sessilifolia</i>	miterwort
2097	FACW	
2098	<i>Myrica cerifera</i>	wax myrtle
2099	FAC	
2100	<i>Panicum hemitomon</i>	maiden cane
2101	OBL	
2102	<i>Paspalum monostachyum</i>	gulfcoast paspalum
2103	OBL	
2104	<i>Pinus elliotii</i>	slash pine
2105	<i>Pluchea odorata</i>	fleabane
2106	FACW	
2107	<i>Polygala cruciata</i>	--
2108	FACW	
2109	<i>Rhynchospora pusilla</i>	beakrush
2110	FACW	
2111	<i>Serenoa repens</i>	saw palmetto
2112	<i>Xyris jupicae</i>	yellow-eyed grass
2113	FACW	
2114	<i>Xyris</i> sp.	yellow-eyed grass
2115	OBL	
2116		
2117		
2118		

2119	<u>Other Representative Plants Near, But not Within Quadrat</u>			
2120				
2121	<i>Asimina reticulata</i>		dog apple	
2122	<i>Cladium jamaicense</i>		sawgrass	
2123	OBL			
2124	<i>Eustachys glauca</i>		grass	
2125	FACW			
2126	<i>Flaveria linearis</i>		yellow-top	
2127	FACW			
2128	<i>Ipomoea sagittata</i>		morning glory	
2129	<i>Lythrum alatum</i>		loosestrife	
2130	OBL			
2131	<i>Sabal palmetto</i>		sabal palm	
2132	FAC			
2133	<i>Smilax auriculata</i>		greenbriar	
2134				
2135				
2136	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X			
2137	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four			
2138	randomly selected 10m transects within the sample quadrat.			
2139				
2140	<u>Species</u>		<u>Meters intercepted</u>	
2141				
2142	<u>Tree Canopy</u>		Exotics*	
2143	<i>Pinus elliottii</i>	<u>1.08</u>		
2144			1.08	
2145	<u>Shrubs</u>			
2146	<i>Ilex glabra</i>	0.13		
2147	<i>Serenoa repens</i>		<u>3.61</u>	
2148			3.74	
2149	<u>Ground Cover</u>			
2150	<i>Andropogon virginicus</i>	0.34		
2151	<i>Dichanthelium</i> sp.	0.43		
2152	<i>Elyonurus tripsacoides</i>	0.29		
2153	<i>Eupatorium mikanioides</i>	0.02		
2154	<i>Eupatorium leucolepis</i>	0.02		
2155	<i>Hypericum tetrapetalum</i>	0.03		
2156	<i>Hyptis alata</i>	0.01		
2157	<i>Lachnanthes caroliniana</i>	0.01		
2158	<i>Lachnocaulon anceps</i>	0.24		
2159	<i>Mitreola sessilifolia</i>	0.01		
2160	<i>Myrica cerifera</i>	0.47		
2161	<i>Panicum hemitomom</i>	0.07		
2162	<i>Paspalum monostachyum</i>	0.08		
2163	<i>Pluchea odorata</i>	0.08		
2164	<i>Polygala cruciata</i>	0.03		
2165	<i>Rhynchospora pusilla</i>	0.13		
2166	<i>Xyris jupicae</i>	1.34	1.34	
2167	<i>Xyris</i> sp.		0.56	
2168	unk. herb		<u>0.04</u>	
2169			4.21	<u>1.34</u>

2170
2171 Site 8.
2172 Twp. S, Rng. E, Sec. .
2173
2174
2175 This site is not within public ownership, and has not been analyzed.
2176

Site 9. 0.5 km west of Everglades Blvd., ca. 50 m north of Lynch Blvd. Twp. 51S, Rng. 28E, Sec. 30.

Date of cover measures: 15 July, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Sand prairie. This area is a homogeneous graminoid prairie that extends ca. 3.5 km to the north and northeast; Sample Quadrats 18 and 26 are also located in this continuous prairie system. Trees and shrubs are rare in this community, and their occurrence may represent differences in subtending soils, as topography appears to be nearly level throughout. Caespitose graminoids make up much of the community, so that tufts of plants are frequently adjacent to nearly bare sand; however, the appearance of the community is nearly complete ground cover. The community is diverse, with occasional adventitious herbs, and algal mats are common on open sand areas that are not covered by vascular plants. Soil is sand and marl with little organic material; Almost no leaf litter was noted. Fire burned through this area ca. 1.5 yr previous. Exotic plants were not noted near the sample quadrat area.

Indicators of inundation: Within the sample quadrat area were seven species of vascular plants that are listed as Obligate wetland inhabitants, and six species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). On 7/15/97 this area had water ca. 4-5 cm beneath the soil surface; the cypress slough to the west (Site 10.) was inundated with 4-5 cm water, suggesting that the ground surface in the adjacent cypress slough may be ca. 10 cm lower than the prairie.

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This area was identified by Leighty et al.(1954) as partly dominated by cypress trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

Current Detailed Soil Descriptions

Series: Malabar

Taxonomic Class: Loamy, siliceous, hyperthermic, Grossarenic Ochraqualfs

C - 0 to 1 inch; light brownish gray (2.5Y 6/1) silt loam; weak fine subangular blocky structure; very friable; few fine roots; few snail shells; strongly effervescent; abrupt smooth boundary.

A - 1 to 9 inches; mixed gray (10YR 5/1), and light gray (10YR 7/2), fine sand; single grained; loose; few snail shells; the light gray part is stripping (20%); moderately effervescent; clear wavy boundary.

E - 9 to 40 inches; very pale brown (10YR 7/3) fine sand; single grained; loose; gradual wavy boundary.

Bw - 40 to 50 inches; brown (10YR 5/3) fine sand; single grained; loose; abrupt irregular boundary.

2227 Bt&C - 50 to 60 inches; gray (10YR 5/1) loamy fine sand; weak fine subangular blocky
 2228 structure; very friable; common fine sand intrusions of fine sand; abrupt irregular
 2229 boundary.

2230 IIR - 60 inches; fractured limestone. Depth of rock in the area is greater than 40 inches.

2231

2232 Piezometer GPS location:

2233

2234 GPS Coordinates

2235

2236 North 2876259.76

East 445218.73

2237

2238

2239

2240

2241 Quadrat location: The piezometer is established as the southwestern corner of the sample
 2242 quadrat area.

2243

2244

2245 Vascular Plant Species Encountered (Total = 20)

2246

2247 *Agalinis purpurea* false foxglove

2248 FACW

2249 *Andropogon virginicus* broomsedge

2250 FAC

2251 *Cladium jamaicense* sawgrass

2252 OBL

2253 *Dichanthelium* sp. grass

2254 *Dichondra carolinensis* pony foot

2255 FAC

2256 *Dichromena colorata* white-top sedge

2257 FACW

2258 *Euphorbia polyphylla* spurge

2259 FACW

2260 *Flaveria linearis* yellow-top

2261 FACW

2262 *Fuirena scirpoidea* umbrella grass

2263 OBL

2264 *Heliotropium polyphyllum* pineland heliotrope

2265 FAC

2266 *Hypericum reductum* Atlantic St. John's-wort

2267 *Muhlenbergia capillaris* muhly grass

2268 OBL

2269 *Panicum tenerum* bluejoint panicum

2270 OBL

2271 *Paspalum monostachyum* gulfcoast paspalum

2272 OBL

2273 *Phragmites australis* reed

2274 OBL

2275 *Pluchea odorata* fleabane

2276 FACW

2277 *Rhynchospora pusilla* beakrush

2278 FACW

2279 *Samolus ebracteatus* pimpernel

2280	OBL		
2281	<i>Schizachyrium rhizomatum</i>		south Florida bluestem
2282	FAC		
2283	<i>Setaria geniculata</i>		grass
2284	FAC		
2285			
2286	<u>Other Representative Plants Near, But not Within Quadrat</u>		
2287			
2288	<i>Myrica cerifera</i>		wax myrtle
2289	FAC		
2290	<i>Sabal palmetto</i>		sabal palm
2291	FAC		
2292	<i>Stillingia aquatica</i>		corkwood
2293	OBL		
2294			
2295			
2296	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
2297	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
2298	randomly selected 10m transects within the sample quadrat.		
2299			
2300	<u>Species</u>		<u>Meters intercepted</u>
2301			
2302	<u>Tree Canopy</u>		Exotics
2303			
2304	<u>Shrubs</u>		
2305			
2306	<u>Ground Cover</u>		
2307	<i>Agalinis purpurea</i>		0.01
2308	<i>Cladium jamaicense</i>		0.07
2309	<i>Dichanthelium</i> sp.		0.05
2310	<i>Dichondra carolinensis</i>		0.35
2311	<i>Dichromena colorata</i>		0.02
2312	<i>Euphorbia polyphylla</i>	0.04	
2313	<i>Flaveria linearis</i>		0.11
2314	<i>Fuirena scirpoidea</i>		0.01
2315	<i>Muhlenbergia capillaris</i>		2.64
2316	<i>Panicum tenerum</i>		0.30
2317	<i>Paspalum monostachyum</i>		0.24
2318	<i>Phragmites australis</i>	0.03	
2319	<i>Pluchea odorata</i>		0.01
2320	<i>Rhynchospora pusilla</i>	2.69	
2321	<i>Schizachyrium rhizomatum</i>		<u>0.20</u>
2322			6.77
2323			

Site 10. 0.6 km west of Everglades Blvd., ca. 50 m north of Lynch Blvd. Twp. 51S, Rng. 28E, Sec. 30.

Date of cover measures: 15 July, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki, I. Crosby

Community type: Cypress slough. The tree canopy is primarily bald cypress that provides about 80% cover. The shrub layer is moderately open (ca. 10-20% cover), composed of wax myrtle, other small hardwoods, and small bald cypress trees. These shrubs appear to be recovering from a recent fire. Ground cover is moderately dense (ca. 80% cover) graminoids with occasional herbs. Soils are siliceous sand subtending 3-5 cm organic muck and litter. Fire burned through this area ca. 1.5 yr. previous. Exotic species are not common in the vicinity of the sample quadrat area.

Indicators of inundation: Within the sample quadrat area were eight species of vascular plants that are listed as Obligate wetland inhabitants, and seven species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). Cypress trees are buttressed and new growth of knees was noted. On 7/15/97 this area was inundated with 4-5 cm water; the prairie to the east (Site 9.) had water ca 4-5 cm beneath the soil surface, suggesting that the ground surface in the cypress slough may be ca. 10 cm lower than the adjacent prairie.

Community type as interpreted by Leighty et al. (1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl.

Current Detailed Soil Descriptions

Series: Malabar

Taxonomic Class: Loamy, siliceous, hyperthermic, Grossarenic Ochraqualfs

Oa - 2 to 0 inches; dark brown (10YR 3/2) muck; rubbed and unrubbed sapric material; 5 percent fiber unrubbed; many fine roots; abrupt smooth boundary.

A - 0 to 6 inches; very dark gray (10YR 4/1), gray (10YR 5/1), and grayish brown (10YR 5/2) fine sand; weak fine granular structure; very friable; the gray and grayish brown part is stripping (25%); common fine and medium roots; clear wavy boundary.

E1 - 6 to 13 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; common coarse roots; gradual wavy boundary.

E2 - 13 to 60 inches; very pale brown (10YR 7/3) fine sand; single grained; loose; common coarse roots; abrupt wavy boundary.

Bt - 60 to 68 inches; gray (10YR 5/1) loamy fine sand; weak fine subangular blocky structure; very friable; abrupt irregular boundary.

IIR - 68 inches; fractured limestone. Depth of rock in the area is greater than 40 inches.

Piezometer GPS location:

2374		
2375	GPS Coordinates	
2376		
2377	North 2876271.05	East 445142.76
2378		
2379		
2380	<u>Quadrat location:</u> The piezometer is established as the <u>southeastern</u> corner of the sample	
2381	quadrat area.	
2382		
2383		
2384	<u>Vascular Plant Species Encountered (Total = 29)</u>	
2385		
2386	<i>Baccharis halimifolia</i>	saltbush
2387	FAC	
2388	<i>Blechnum serrulatum</i>	blechnum fern
2389	FACW	
2390	<i>Boehmeria cylindrica</i>	false nettle
2391	OBL	
2392	<i>Centella asiatica</i>	--
2393	<i>Cladium jamaicense</i>	sawgrass
2394	OBL	
2395	<i>Dichanthelium</i> sp.	grass
2396	<i>Dichondra carolinensis</i>	pony foot
2397	FAC	
2398	<i>Dichromena colorata</i>	white-top sedge
2399	FACW	
2400	<i>Eupatorium capillifolium</i>	dog fennel
2401	FAC	
2402	<i>Eustachys glauca</i>	grass
2403	FACW	
2404	<i>Hydrocotyle umbellata</i>	pennywort
2405	FACW	
2406	<i>Hypericum brachyphyllum</i>	--
2407	FACW	
2408	<i>Ilex cassine</i>	dahoon holly
2409	OBL	
2410	<i>Ipomoea sagittata</i>	morning glory
2411	<i>Lachnanthes caroliniana</i>	bloodroot
2412	FAC	
2413	<i>Lippia nodiflora</i>	carpetweed
2414	<i>Lythrum alatum</i>	loosestrife
2415	OBL	
2416	<i>Mikania scandens</i>	white vine
2417	<i>Myrica cerifera</i>	wax myrtle
2418	FAC	
2419	<i>Paspalum monostachyum</i>	gulfcoast paspalum
2420	OBL	
2421	<i>Persea borbonia</i>	red bay
2422	<i>Pluchea odorata</i>	fleabane
2423	FACW	
2424	<i>Rhynchospora inundata</i>	horned beakrush
2425	OBL	
2426	<i>Sabal palmetto</i>	sabal palm
2427	FAC	

2428	<i>Stillingia aquatica</i>	corkwood	
2429	OBL		
2430	<i>Taxodium distichum</i>	bald cypress	
2431	OBL		
2432	<i>Teucrium canadense</i>	germander	
2433	FACW		
2434	unk. grass	--	
2435	unk. sedge	--	
2436			
2437			
2438			
2439	<u>Other Representative Plants Near, But not Within Quadrat</u>		
2440			
2441	<i>Agalinis purpurea</i>	false foxglove	
2442	FACW		
2443			
2444	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
2445	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
2446	randomly selected 10m transects within the sample quadrat.		
2447			
2448	<u>Species</u>	<u>Meters intercepted</u>	
2449			
2450	<u>Tree Canopy</u>		Exotics
2451	<i>Taxodium distichum</i>	<u>6.10</u>	
2452			6.10
2453	<u>Shrubs</u>		
2454	<i>Myrica cerifera</i>	0.34	
2455	<i>Persea borbonia</i>	0.06	
2456	<i>Stillingia aquatica</i>	0.13	
2457	<i>Taxodium distichum</i>	<u>2.85</u>	
2458			3.38
2459	<u>Ground Cover</u>		
2460	<i>Baccharis halimifolia</i>	0.05	
2461	<i>Blechnum serrulatum</i>	0.06	
2462	<i>Boehmeria cylindrica</i>	0.01	
2463	<i>Centella asiatica</i>	0.48	0.48
2464	<i>Cladium jamaicense</i>	0.08	
2465	<i>Dichanthelium</i> sp.	0.12	
2466	<i>Dichondra carolinensis</i>	0.66	
2467	<i>Eupatorium capillifolium</i>	0.02	
2468	<i>Eustachys glauca</i>	0.21	
2469	<i>Hydrocotyle umbellata</i>	0.48	
2470	<i>Hypericum brachyphyllum</i>	0.26	
2471	<i>Ipomoea sagittata</i>	0.04	
2472	<i>Lippia nodiflora</i>	0.02	
2473	<i>Lythrum alatum</i>		0.04
2474	<i>Mikania scandens</i>	0.06	
2475	<i>Paspalum monostachyum</i>	3.46	
2476	<i>Pluchea odorata</i>	0.02	
2477	<i>Rhynchospora inundata</i>	0.15	
2478	<i>Sabal palmetto</i>		0.01
2479	<i>Teucrium canadense</i>	0.25	
2480	unk. grass	0.02	
2481	unk. sedge	<u>0.12</u>	

2482
2483
2484

6.62

0.48

2484 Site 11. ca. 0.15 mi west of Merritt Blvd., ca. 70 m north of 69th Ave. SE. Twp. 50S,
 2485 Rng. 28E, Sec. 15.
 2486
 2487 Date of cover measures: 22 July, 1997.
 2488
 2489 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 2490
 2491 Community type: Disturbed prairie with pines. The tree canopy is mostly young sabal
 2492 palms with occasional emergent older sabal palms and slash pines. The young sabal
 2493 palms provide about 50% cover and the older emergents about 10% cover; few other
 2494 remnants of older vegetation are apparent. The shrub layer is almost entirely sabal palms
 2495 (ca. 50% cover) with occasional small hardwoods. Ground cover is about 50% complete
 2496 and is mostly graminoids with many sparse weedy herbs. Soils are sandy with few
 2497 organics and little surface organic material. Fire appears to have burned the area within
 2498 the past 10 yr. Exotics: Brazilian pepper occurs in the area, and is common but not
 2499 dominant.
 2500 Occasional wetland indicators occur here with many ruderal species; these are
 2501 species that are common in mesic to xeric disturbed communities, suggesting that this
 2502 area has changed within the past few decades. This is further supported by the apparently
 2503 recent recruitment of sabal palms throughout the area. This appears to have been a
 2504 shortgrass prairie that is now succeeding to a sabal palm hammock.
 2505
 2506 Indicators of inundation: Within the sample quadrat area were two species of vascular
 2507 plants that are listed as Obligate wetland inhabitants, and six species that are listed as
 2508 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 2509 (Hydric Soil Field Indicators, lists for Chapter 62340). The area does not appear to have
 2510 been flooded during the past several years.
 2511
 2512
 2513 Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage
 2514 or ponded water in nearly level to slightly depressional areas. These are dominated by
 2515 short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees.
 2516 Leighty et al. (1954) indicated this area as dominated by pine trees.
 2517
 2518
 2519 Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.
 2520
 2521 Current Detailed Soil Descriptions
 2522
 2523 Series: Hallandale
 2524 Taxonomic Class: Siliceous, hyperthermic, Lithic Psammaquents
 2525
 2526 A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure;
 2527 very friable; many uncoated sand grains; common fine roots; clear wavy boundary.
 2528 E - 3 to 6 inches; mixed brown (10YR 4/3), very pale brown (10YR 7/3), and grayish
 2529 brown (10YR 5/2) fine sand; weak fine granular structure; very friable; common fine
 2530 roots; clear wavy boundary.
 2531 B - 6 to 10 inches; pale brown (10YR 6/3) fine sand; single grained; loose; few fine
 2532 roots; abrupt irregular boundary.
 2533 IIR - 10 inches; fractured limestone. Depth of rock is usually less than 10 inches.
 2534

2535			
2536	<u>Piezometer GPS location:</u>		
2537			
2538	GPS Coordinates		
2539			
2540	North	East	
2541	Coordinate	Coordinate	
2542			
2543			
2544			
2545			
2546	<u>Quadrat location:</u> The piezometer is established as the <u>southwestern</u> corner of the sample		
2547	quadrat area.		
2548			
2549			
2550	<u>Vascular Plant Species Encountered (Total = 27)</u>		
2551			
2552	<i>Andropogon virginicus</i>		broomsedge
2553	FAC		
2554	<i>Baccharis halimifolia</i>		saltbush
2555	FAC		
2556	<i>Bidens alba</i>		beggar ticks
2557	FAC		
2558	<i>Blechnum serrulatum</i>		blechnum fern
2559	FACW		
2560	<i>Bumelia celastrina</i>		buckthorn
2561	FAC		
2562	<i>Desmodium paniculatum</i>		--
2563	<i>Dichanthelium</i> sp.		grass
2564	<i>Eustachys glauca</i>		grass
2565	FACW		
2566	<i>Habenaria</i> sp.		rein orchid
2567	FACW		
2568	<i>Hypericum mutilum</i>		--
2569	FACW		
2570	<i>Lantana camara</i>		lantana
2571	<i>Malvastrum corchorifolium</i>		false mallow
2572	<i>Myrica cerifera</i>		wax myrtle
2573	FAC		
2574	<i>Paspalum ciliatifolium</i>		grass
2575	<i>Paspalum monostachyum</i>		gulfcoast paspalum
2576	OBL		
2577	<i>Pentodon pentandrus</i>		--
2578	OBL		
2579	<i>Phlebodium aureum</i>		golden serpent fern
2580	<i>Pinus elliotii</i>		slash pine
2581	<i>Quercus laurifolia</i>		laurel oak
2582	FACW		
2583	<i>Rhus copallina</i>		sumac
2584	<i>Rhynchospora pusilla</i>		beakrush
2585	FACW		
2586	<i>Sabal palmetto</i>		sabal palm
2587	FAC		
2588	<i>Schinus terebinthifolius</i>		Brazilian pepper

2589	FAC		
2590	<i>Schizachyrium rhizomatum</i>		south Florida bluestem
2591	FAC		
2592	<i>Sporobolus</i> sp.		smutgrass
2593	<i>Toxicodendron radicans</i>		poison ivy
2594	<i>Vitis munsoniana</i>		muscadine grape
2595			
2596			
2597	<u>Other Representative Plants Near, But not Within Quadrat</u>		
2598			
2599	<i>Crotalaria rotundifolia</i>	--	
2600	<i>Cynanchum scoparium</i>	--	
2601	<i>Pterocaulon virgatum</i>	rabbit tobacco	
2602	<i>Serenoa repens</i>		saw palmetto
2603	<i>Smilax auriculata</i>	greenbriar	
2604	<i>Solidago</i> sp.	goldenrod	
2605	<i>Vittaria lineata</i>	shoestring fern	
2606			
2607	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
2608	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
2609	randomly selected 10m transects within the sample quadrat.		
2610			
2611	<u>Species</u>	<u>Meters intercepted</u>	
2612			
2613	<u>Tree Canopy</u>		Exotics
2614	<i>Pinus elliotii</i>	4.14	
2615	<i>Sabal palmetto</i>		<u>1.00</u>
2616			5.14
2617	<u>Shrubs</u>		
2618	<i>Baccharis halimifolia</i>	0.25	
2619	<i>Rhus copallina</i>		0.25
2620	<i>Sabal palmetto</i>		<u>5.27</u>
2621			5.77
2622	<u>Ground Cover</u>		
2623	<i>Andropogon virginicus</i>	0.10	
2624	<i>Dichanthelium</i> sp.	0.51	
2625	<i>Eustachys glauca</i>	0.01	
2626	<i>Habenaria</i> sp.	0.02	
2627	<i>Lantana camara</i>		0.05
2628	<i>Malvastrum corchorifolium</i>	0.09	
2629	<i>Paspalum ciliatifolium</i>	0.01	
2630	<i>Paspalum monostachyum</i>	0.27	
2631	<i>Pentodon pentandrus</i>	0.29	
2632	<i>Quercus laurifolia</i>	0.05	
2633	<i>Rhus copallina</i>		0.16
2634	<i>Sabal palmetto</i>		0.14
2635	<i>Schinus terebinthifolius</i>	0.02	0.02
2636	<i>Schizachyrium rhizomatum</i>	0.29	
2637	<i>Sporobolus</i> sp.	0.01	
2638	<i>Toxicodendron radicans</i>	0.22	
2639	<i>Vitis munsoniana</i>	<u>0.25</u>	
2640		2.50	0.02
2641			
2642			

Site 12. ca. 200 m east of the northern end of the southern part of Merritt Blvd. Twp. 51S, Rng. 28E, Sec. 34.

Date of cover measures: 5 June, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Open sabal palm hammock. This area is almost completely dominated by sabal palms; few other large trees occur in this area. Some of the sabal palms are tall canopy emergents, have few or no buttresses, large root masses, and appear to have been established here for many decades; this suggests an older population of formerly scattered canopy dominants or co-dominants. Most of the sabals, however, appear to be recently established individuals. Sabals that appear to have been established for an intermediate length of time are not common, suggesting a younger cohort that has become established recently, perhaps following a change to the system. Sabal palms form open tree and shrub canopies. Grasses and many vines form about 50% ground cover. Soils are sandy with little organic material; rock occurs at various depths beneath the surface, and is often near the surface. Many weedy species and vines suggest that the area has endured stress recently. Many sabal trunks were fire scarred, suggesting that fire may be common in this area.

Indicators of inundation: Within the sample quadrat area were no vascular plants that are listed as Obligate wetland inhabitants, and two species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). The area does not appear to have been flooded during the past several years.

The tops of root masses of old sabal palms are about 38.7 cm (n=22) above the surrounding substrate surface.

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This area was identified by Leighty et al (1954) as partly dominated by cypress trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

Current Detailed Soil Descriptions

Series: Hallandale

Taxonomic Class: Siliceous, hyperthermic, Lithic Psammaquents

A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; many uncoated sand grains; common fine roots; clear wavy boundary.

C - 3 to 18 inches; brown (10YR 5/3) fine sand; single rained; loose; common fine roots; gradual wavy boundary.

IIR - 18 inches; fractured limestone. Depth of rock is often less than 6 inches from the surface.

Piezometer GPS location:

GPS Coordinates

2694		
2695	North	East
2696	Coordinate	Coordinate
2697		
2698		
2699		
2700		
2701	<u>Quadrat location:</u> The piezometer is established as the <u>southwestern</u> corner of the sample	
2702	quadrat area.	
2703		
2704		
2705	<u>Vascular Plant Species Encountered (Total = 31)</u>	
2706		
2707	<i>Ampelopsis arborea</i>	pepper vine
2708	<i>Andropogon virginicus</i>	broomsedge
2709	FAC	
2710	<i>Baccharis halimifolia</i>	saltbush
2711	FAC	
2712	<i>Berchemia scandens</i>	rattan vine
2713	<i>Bidens alba</i>	beggar ticks
2714	FAC	
2715	<i>Callicarpa americana</i>	beauty berry
2716	<i>Cynanchum scoparium</i>	--
2717	<i>Dichanthelium</i> sp.	grass
2718	<i>Dichondra carolinensis</i>	pony foot
2719	FAC	
2720	<i>Eryngium balduinii</i>	snakeroot
2721	FAC	
2722	<i>Galium hispidulum</i>	bedstraw
2723		
2724	<i>Habenaria</i> sp.	rein orchid
2725	FACW	
2726	<i>Irsine diffusa</i>	--
2727	<i>Malvastrum corchorifolium</i>	false mallow
2728	<i>Myrica cerifera</i>	wax myrtle
2729	FAC	
2730	<i>Oxalis</i> sp.	sorrel
2731	<i>Parthenocissus quinquefolia</i>	Virginia creeper
2732	<i>Phlebodium aureum</i>	golden serpent fern
2733	<i>Physalis viscosa</i>	ground cherry
2734	<i>Pluchea odorata</i>	fleabane
2735	FACW	
2736	<i>Polypremum procumbens</i>	rustweed
2737	FAC	
2738	<i>Pteridium aquilinum</i>	bracken fern
2739	<i>Quercus laurifolia</i>	laurel oak
2740	FACW	
2741	<i>Sabal palmetto</i>	sabal palm
2742	FAC	
2743	<i>Schinus terebinthifolius</i>	Brazilian pepper
2744	FAC	
2745	<i>Smilax auriculata</i>	greenbriar
2746	<i>Solidago</i> sp.	goldenrod
2747	<i>Sporobolus indicus</i>	smutgrass

2748	<i>Toxicodendron radicans</i>	poison ivy
2749	<i>Vitis munsoniana</i>	muscadine grape
2750	<i>Vittaria lineata</i>	shoestring fern

2751
2752

2753 Other Representative Plants Near, But not Within Quadrat

2754		
2755	<i>Blechnum serrulatum</i>	blechnum fern
2756	FACW	
2757	<i>Eupatorium mikanioides</i>	semaphore eupatorium
2758	FACW	
2759	<i>Hypericum mutilum</i>	--
2760	FACW	
2761	<i>Imperata cylindrica</i>	Cogon grass
2762	<i>Mitreola sessilifolia</i>	miterwort
2763	FACW	
2764	<i>Pentodon pentandrus</i>	--
2765	OBL	

2766
2767

2768 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
2769 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
2770 randomly selected 10m transects within the sample quadrat. The category Epiphytes
2771 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
2772 ground, but contribute to the tree or shrub canopy layers.

2773

2774	<u>Species</u>	<u>Meters intercepted</u>
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2775

2776	<u>Tree Canopy</u>	Exotics
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2777	<i>Quercus laurifolia</i>	0.49	
2778	<i>Sabal palmetto</i>		<u>5.49</u>
2779			5.96

2780

2781 Shrubs

2782	<i>Baccharis halimifolia</i>	0.24	
2783	<i>Myrica cerifera</i>	0.24	
2784	<i>Quercus laurifolia</i>	0.87	
2785	<i>Sabal palmetto</i>		<u>4.82</u>
2786			6.17

2787

2788 Epiphytes

2788	<i>Ampelopsis arborea</i>	0.06	
2789	<i>Berchemia scandens</i>	0.08	
2790	<i>Parthenocissus quinquefolia</i>	0.07	
2791	<i>Phlebodium aureum</i>	0.14	
2792	<i>Smilax auriculata</i>	0.23	
2793	<i>Vitis munsoniana</i>	0.29	
2794	<i>Vittaria lineata</i>	<u>0.04</u>	
2795			0.91

2796

2797 Ground Cover

2797	<i>Ampelopsis arborea</i>	0.02	
2798	<i>Andropogon virginicus</i>	0.20	
2799	<i>Baccharis halimifolia</i>	0.04	
2800	<i>Berchemia scandens</i>	0.08	
2801	<i>Cynanchum scoparium</i>		0.01

2802	<i>Dichantherium</i> sp.	0.29		
2803	<i>Dichondra carolinensis</i>	0.02		
2804	<i>Habenaria</i> sp.	0.01		
2805	<i>Irsine diffusa</i>	0.05		
2806	<i>Malvastrum corchorifolium</i>	0.01		
2807	<i>Parthenocissus quinquefolia</i>	0.01		
2808	<i>Phlebodium aureum</i>	0.09		
2809	<i>Physalis viscosa</i>	0.01		
2810	<i>Pteridium aquilinum</i>	0.05		
2811	<i>Sabal palmetto</i>		0.04	
2812	<i>Schinus terebinthifolius</i>	0.01		0.01
2813	<i>Smilax auriculata</i>	0.33		
2814	<i>Sporobolus indicus</i>	0.12		0.12
2815	<i>Toxicodendron radicans</i>	0.44		
2816	<i>Vitis munsoniana</i>	<u>0.14</u>		
2817			2.89	0.13
2818				
2819				
2820				
2821				

Site 13. ca. 30 m south of 108th Ave.SE, ca. 0.3 mi. west of the easternmost drainage canal. Twp. 51S, Rng. 28E, Sec. 12.

Date of cover measures: 26 June, 1997

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Prairie. This area is dominated by graminoids with occasional herbs; this ground cover provides ca. 50% cover. Trees and shrubs are rare in this community, and their occurrence may represent differences in subtending soils, as topography appears to be nearly level throughout. Caespitose graminoids make up much of the community, so that tufts of plants are frequently adjacent to nearly bare sand; however, the appearance of the community is nearly complete ground cover. The community is diverse, with occasional adventitious herbs. Soil is marl with sand with little organic material, and less than 1 cm leaf litter on the soil surface. Limestone occurred variably from 2-20" below the soil surface. No evidence of fire was noted. Brazilian pepper occurs in the area, but is not common.

Indicators of inundation: Within the sample quadrat area were four species of vascular plants that are listed as Obligate wetland inhabitants, and seven species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

Current Detailed Soil Descriptions

Series: Ochopee

Taxonomic Class: Coarse-loamy, mixed (calcareous), hyperthermic Lithic Haplaquepts

A - 0 to 4 inches; brown (10YR 4/3) fine sand; weak fine granular structure; very friable; strongly effervescent; many fine roots; clear smooth boundary.

C - 3 to 15 inches; mixed grayish brown (10YR 5/2), gray (10YR 5/1), and brown (10YR 5/3) fine sand; single grained; loose; the gray (20%) is stripping and the brown (20%) is staining along root channels; strongly effervescent; common fine and medium roots; gradual wavy boundary.

IIR - 15 inches; fractured limestone. Depth of rock is often near the surface.

Piezometer GPS location:

GPS Coordinates

North 2880241.39

East 453656.64

2872 Quadrat location: The piezometer is established as the northeastern corner of the sample
 2873 quadrat area.

2874

2875

2876 Vascular Plant Species Encountered (Total = 21)

2877

2878	<i>Andropogon virginicus</i>	broomsedge
2879	FAC	
2880	<i>Blechnum serrulatum</i>	blechnum fern
2881	FACW	
2882	<i>Bumelia celastrina</i>	buckthorn
2883	FAC	
2884	<i>Cladium jamaicense</i>	sawgrass
2885	OBL	
2886	<i>Desmodium paniculatum</i>	--
2887	<i>Dichanthelium</i> sp.	grass
2888	<i>Elytraria caroliniensis</i>	scalystem
2889	FAC	
2890	<i>Emelia</i> sp.	--
2891	FACW	
2892	<i>Euphorbia polyphylla</i>	spurge
2893	FACW	
2894	<i>Flaveria linearis</i>	yellow-top
2895	FACW	
2896	<i>Hypericum mutilum</i>	--
2897	FACW	
2898	<i>Ipomoea sagittata</i>	morning glory
2899	<i>Muhlenbergia capillaris</i>	muhly grass
2900	OBL	
2901	<i>Myrica cerifera</i>	wax myrtle
2902	FAC	
2903	<i>Paspalum monostachyum</i>	gulfcoast paspalum
2904	OBL	
2905	<i>Physalis viscosa</i>	ground cherry
2906	<i>Pluchea odorata</i>	fleabane
2907	FACW	
2908	<i>Rhynchospora pusilla</i>	beakrush
2909	FACW	
2910	<i>Sagittaria lancifolia</i>	duck potato
2911	OBL	
2912	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
2913	FAC	
2914	<i>Spermacoce verticillata</i>	--

2915

2916 Other Representative Plants Near, But not Within Quadrat

2917

2918

2919	<i>Bidens alba</i>	beggar ticks
2920	FAC	
2921	<i>Crotalaria rotundifolia</i>	--
2922	<i>Cynanchum scoparium</i>	--
2923	<i>Eulophia alata</i>	wild coco
2924	<i>Pteridium aquilinum</i>	bracken fern
2925	<i>Smilax auriculata</i>	greenbriar

2926	<i>Solidago</i> sp.	goldenrod	
2927	<i>Vittaria lineata</i>	shoestring fern	
2928			
2929			
2930	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
2931	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
2932	randomly selected 10m transects within the sample quadrat.		
2933			
2934	<u>Species</u>	<u>Meters intercepted</u>	
2935			
2936	<u>Tree Canopy</u>		Exotics
2937			
2938	<u>Shrubs</u>		
2939			
2940	<u>Ground Cover</u>		
2941	<i>Andropogon virginicus</i>	0.04	
2942	<i>Cladium jamaicense</i>	0.19	
2943	<i>Dichanthelium</i> sp.	0.07	
2944	<i>Elytraria carolinensis</i>	0.37	
2945	<i>Euphorbia polyphylla</i>	0.42	
2946	<i>Flaveria linearis</i>	0.09	
2947	<i>Ipomoea sagittata</i>	0.08	
2948	<i>Muhlenbergia capillaris</i>	0.13	
2949	<i>Paspalum monostachyum</i>	2.04	
2950	<i>Physalis viscosa</i>	0.03	
2951	<i>Pluchea odorata</i>	0.05	
2952	<i>Sagittaria lancifolia</i>	0.02	
2953	<i>Schizachyrium rhizomatum</i>	1.29	
2954	<i>Spermacoce verticillata</i>	<u>0.19</u>	
2955			5.01
2956			
2957			

2957 Site 14. Pretty Island? or Slate Prairie? ca. 50 m south of 79th Ave. SE, ca. 0.5 km w of
 2958 easternmost drainage canal. Twp. 50S, Rng. 28E, Sec. 25.
 2959
 2960 Date of cover measures: 22 July, 1997
 2961
 2962 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 2963
 2964 Community type: Prairie and woodland ecotone. This area appears to be a prairie that is
 2965 succeeding to a more tree-dominated community. Most of the newly recruited trees are
 2966 young slash pines occurring among small cypress and hardwood islands. The tree canopy
 2967 is mostly sparse, but in some nearby islands slash pine, cypress, and occasional dahoon
 2968 holly form about 50% cover. The shrub layer is also sparse, covering ca. 20%, and mostly
 2969 made up of beauty berry in the sample quadrat. Ground cover is moderately dense (ca.
 2970 70%) and made up of graminoids; muhly grass is common but not dominant. Soils are
 2971 mostly marl with little organic material, and 0-1 cm organic litter on the surface;
 2972 limestone occurs at 0-14 in. below the soil surface. Evidence of fire was not noted. Exotic
 2973 species: Brazilian pepper occurs in the area, but is not common.
 2974
 2975
 2976 Indicators of inundation: Within the sample quadrat area were four species of vascular
 2977 plants that are listed as Obligate wetland inhabitants, and four species that are listed as
 2978 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 2979 (Hydric Soil Field Indicators, lists for Chapter 62340).
 2980
 2981 Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage
 2982 or ponded water in nearly level to slightly depressional areas. These are dominated by
 2983 short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This
 2984 area was identified by Leighty et al. as partly dominated by pine trees.
 2985
 2986
 2987 Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.
 2988
 2989 Current Detailed Soil Descriptions
 2990
 2991 Series: Ochopee
 2992 Taxonomic Class: Coarse-loamy, mixed (calcareous), hyperthermic Lithic Haplaquepts
 2993
 2994 C - 3 to 0 inches; gray (10YR 6/1) silt loam; weak fine granular structure; very friable;
 2995 strongly effervescent; few fine roots; abrupt wavy boundary.
 2996 A - 0 to 3 inches; brown (10YR 4/3) loamy fine sand; weak fine granular structure; very
 2997 friable; many fine roots; clear wavy boundary.
 2998 IIC - 3 to 30 inches; light gray (10YR 7/1) silt loam; massive; slightly sticky when wet;
 2999 strongly effervescent; common fine shell fragments near the limestone with sandy
 3000 intrusions; abrupt irregular boundary.
 3001 IIIR - Fractured limestone. Depth of rock varies from surface to 36 inches.
 3002
 3003 Piezometer GPS location:
 3004
 3005 GPS Coordinates
 3006
 3007 North East
 3008 Coordinate Coordinate

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Quadrat location: The piezometer is established as the southwestern corner of the sample quadrat area.

Vascular Plant Species Encountered (Total = 22)

<i>Andropogon virginicus</i>	broomsedge
FAC	
<i>Baccharis halimifolia</i>	saltbush
FAC	
<i>Callicarpa americana</i>	beauty berry
<i>Cladium jamaicense</i>	sawgrass
OBL	
<i>Conoclinium coelestinum</i>	mist flower
FAC	
<i>Dichanthelium</i> sp.	grass
<i>Eupatorium capillifolium</i>	dog fennel
FAC	
<i>Euphorbia polyphylla</i>	spurge
FACW	
<i>Hypericum mutilum</i>	--
FACW	
<i>Ipomoea sagittata</i>	morning glory
<i>Lantana camara</i>	lantana
<i>Muhlenbergia capillaris</i>	muhly grass
OBL	
<i>Paspalum monostachyum</i>	gulfcoast paspalum
OBL	
<i>Passiflora suberosa</i>	wild passion vine
<i>Persea borbonia</i>	red bay
<i>Pluchea odorata</i>	fleabane
FACW	
<i>Pteris vittata</i>	--
<i>Schinus terebinthifolius</i>	Brazilian pepper
FAC	
<i>Setaria geniculata</i>	grass
FAC	
<i>Solidago</i> sp.	goldenrod
<i>Taxodium distichum</i>	bald cypress
OBL	
<i>Thelypteris normalis</i>	fern
FACW	

Other Representative Plants Near, But not Within Quadrat

<i>Berchemia scandens</i>	rattan vine
<i>Borreria verticillata</i>	--
<i>Bumelia celastrina</i>	buckthorn
FAC	

3063	<i>Coreopsis leavenworthii</i>		tickseed
3064	FACW		
3065	<i>Dichromena colorata</i>		white-top sedge
3066	FACW		
3067	<i>Eustachys glauca</i>		grass
3068	FACW		
3069	<i>Flaveria linearis</i>		yellow-top
3070	FACW		
3071	<i>Ilex cassine</i>		dahoon holly
3072	OBL		
3073	<i>Myrica cerifera</i>		wax myrtle
3074	FAC		
3075	<i>Parthenocissus quinquefolia</i>		Virginia creeper
3076	<i>Pinus elliottii</i>		slash pine
3077	<i>Polygala grandiflora</i>		candyroot
3078	<i>Sabal palmetto</i>		sabal palm
3079	FAC		
3080	<i>Schizachyrium rhizomatum</i>		south Florida bluestem
3081	FAC		
3082			
3083			
3084			
3085	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
3086	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
3087	randomly selected 10m transects within the sample quadrat.		
3088			
3089	<u>Species</u>		<u>Meters intercepted</u>
3090			
3091	<u>Tree Canopy</u>		Exotics
3092	<i>Taxodium distichum</i>	<u>1.11</u>	
3093			1.11
3094	<u>Shrubs</u>		
3095	<i>Baccharis halimifolia</i>	0.05	
3096	<i>Callicarpa americana</i>	<u>1.56</u>	
3097			1.61
3098	<u>Ground Cover</u>		
3099	<i>Andropogon virginicus</i>		0.01
3100	<i>Callicarpa americana</i>	0.34	
3101	<i>Cladium jamaicense</i>		1.62
3102	<i>Dichanthelium</i> sp.		0.07
3103	<i>Paspalum monostachyum</i>		7.30
3104	<i>Passiflora suberosa</i>		0.04
3105	<i>Pluchea odorata</i>		0.01
3106	<i>Pteris vittata</i>		0.32
3107	<i>Solidago</i> sp.		0.07
3108	<i>Thelypteris normalis</i>	<u>0.16</u>	
3109			9.94
3110			
3111	Site 15. North side of 54th Ave NE, ca. 50 m west of Merritt Blvd., Twp. 50S, Rng. 28E,		
3112	Sec. 4.		
3113			
3114	<u>Date of cover measures:</u> 25 June, 1997		
3115			
3116	<u>Investigators:</u> J. N. Burch, G. Hendricks, H. Yamataki		

3117
3118 Community type: Slash pine flatwoods. High species diversity and high incidences of
3119 vines and other ruderals create the appearance that this area has undergone some
3120 disturbance, perhaps fire, within the past few years. The tree canopy is nearly compete
3121 and dominated by slash pines with sabal palms, oaks, and occasional Brazilian pepper.
3122 The shrub layer is moderately dense and partly made up of several vine species. Shrubs
3123 are mostly slash pines, oaks, and sabal palms (i.e. species composition similar to the
3124 canopy). Ground cover is also largely vines with bracken ferns and scattered herbs,
3125 covering ca. 50% of the ground surface. Soils are non-hydric and sandy with ca. 10%
3126 organic material mixed. Small amounts (0-0.5 cm) of leaf litter occur on the soil surface;
3127 limestone occurs ca. 6-12" below the soil surface. Fire has left some char on nearby sabal
3128 palms; this fire appears to have occurred 5-10 yr. previous. Brazilian pepper is common
3129 to co-dominant in the area, but was largely killed by the previous winter's freeze.

3130
3131
3132 Indicators of inundation: Within the sample quadrat area were no vascular plants that are
3133 listed as Obligate wetland inhabitants, and four species that are listed as Facultative
3134 wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil
3135 Field Indicators, lists for Chapter 62340). This area does not appear ro have been
3136 inundated recently.

3137
3138 Community type as interpreted by Leighty et al.(1954):
3139 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
3140 epiphytes are common. These areas are nearly level and covered with water all or most of
3141 the year.

3142
3143 Soil type (Leighty et al., 1954): Cypress swamp.

3144
3145 Current Detailed Soil Descriptions

3146
3147 Series: Hallandale
3148 Taxonomic Class: siliceous, hyperthermic, Lithic Psammaquents
3149
3150 A - 0 to 4 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure;
3151 very friable; many uncoated sand grains; common fine roots; clear wavy boundary.
3152 C - 4 to 8 inches; brown (10YR 5/3) fine sand; single grained; loose; common fine roots;
3153 abrupt irregular boundary.
3154 IIR - 8 inches; fractured limestone. Depth of rock is often less than 6 inches from the
3155 surface.

3156
3157
3158 Piezometer GPS location:

3159
3160 GPS Coordinates
3161
3162 North East
3163 Coordinate Coordinate

3164
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3168 Quadrat location: The piezometer is established as the southeastern corner of the sample
 3169 quadrat area.

3170
 3171

3172 Vascular Plant Species Encountered (Total = 32)

3173

3174	<i>Acer rubrum</i>	red maple
3175	FACW	
3176	<i>Ampelopsis arborea</i>	pepper vine
3177	<i>Andropogon virginicus</i>	broomsedge
3178	FAC	
3179	<i>Baccharis halimifolia</i>	saltbush
3180	FAC	
3181	<i>Berchemia scandens</i>	rattan vine
3182	FAC	
3183	<i>Blechnum serrulatum</i>	blechnum fern
3184	FACW	
3185	<i>Bumelia celastrina</i>	buckthorn
3186	FAC	
3187	<i>Callicarpa americana</i>	beauty berry
3188	<i>Cassia</i> sp.	--
3189	<i>Crotalaria rotundifolia</i>	--
3190	<i>Desmodium paniculatum</i>	--
3191	<i>Dichanthelium</i> sp.	grass
3192	<i>Mikania cordifolia</i>	--
3193	<i>Myrica cerifera</i>	wax myrtle
3194	FAC	
3195	<i>Parthenocissus quinquefolia</i>	Virginia creeper
3196	<i>Persea borbonia</i>	red bay
3197	<i>Phlebodium aureum</i>	golden serpent fern
3198	<i>Pinus elliotii</i>	slash pine
3199	<i>Psilotum nudum</i>	whisk fern
3200	<i>Psychotria nervosa</i>	wild coffee
3201	FAC	
3202	<i>Pteridium aquilinum</i>	bracken fern
3203	<i>Quercus laurifolia</i>	laurel oak
3204	FACW	
3205	<i>Quercus virginiana</i>	live oak
3206	<i>Rhus copallina</i>	sumac
3207	<i>Rhynchosia cineria</i>	snout bean
3208	<i>Sabal palmetto</i>	sabal palm
3209	FAC	
3210	<i>Schinus terebinthifolius</i>	Brazilian pepper
3211	FAC	
3212	<i>Smilax auriculata</i>	greenbriar
3213	<i>Thelypteris normalis</i>	fern
3214	FACW	
3215	<i>Toxicodendron radicans</i>	poison ivy
3216	<i>Vitis munsoniana</i>	muscadine grape
3217	<i>Vittaria lineata</i>	shoestring fern

3218

3219

3220 Other Representative Plants Near, But not Within Quadrat

3221

3222	<i>Bidens alba</i>	beggar ticks
3223	<i>Cynanchum scoparium</i>	--
3224	<i>Malvastrum corchorifolium</i>	false mallow
3225	<i>Rapanea punctata</i>	myrsine
3226	FAC	
3227	<i>Taxodium distichum</i>	bald cypress
3228	OBL	
3229	<i>Tillandsia fasciculata</i>	air plant

3230
3231

3232 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
3233 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
3234 randomly selected 10m transects within the sample quadrat. The category Epiphytes
3235 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
3236 ground, but contribute to the tree or shrub canopy layers.

3237

3238	<u>Species</u>	<u>Meters intercepted</u>
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3239

3240	<u>Tree Canopy</u>	Exotics
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3241	<i>Pinus elliottii</i>	0.24
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3242	<i>Quercus virginiana</i>	4.55
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3243	<i>Sabal palmetto</i>	<u>5.13</u>
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3244		9.92
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3245	<u>Shrubs</u>
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3246	<i>Acer rubrum</i>	0.05
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3247	<i>Bumelia celastrina</i>	0.05
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3248	<i>Callicarpa americana</i>	0.09
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3249	<i>Myrica cerifera</i>	0.12
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3250	<i>Persea borbonia</i>	0.13
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3251	<i>Quercus virginiana</i>	0.02
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3252	<i>Sabal palmetto</i>	2.19
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3253	<i>Schinus terebinthifolius</i>	<u>0.16</u>	<u>0.16</u>
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3254		2.81	0.16
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3255	<u>Epiphytes</u>
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3256	<i>Berchemia scandens</i>	0.12
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3257	<i>Parthenocissus quinquefolia</i>	0.20
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3258	<i>Quercus laurifolia</i>	0.02
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3259	<i>Rhynchosia cineria</i>	0.84
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3260	<i>Smilax auriculata</i>	0.21
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3261	<i>Toxicodendron radicans</i>	0.95
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3262	<i>Vitis munsoniana</i>	0.73
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3263	<i>Vittaria lineata</i>	<u>0.04</u>
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3264		3.11
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3265	<u>Ground Cover</u>
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3266	<i>Andropogon virginicus</i>	0.01
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3267	<i>Baccharis halimifolia</i>	0.21
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3268	<i>Berchemia scandens</i>	0.05
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3269	<i>Blechnum serrulatum</i>	0.07
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3270	<i>Callicarpa americana</i>	0.13
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3271	<i>Cassia</i> sp.	0.01
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3272	<i>Dichanthelium</i> sp.	0.07
------	--------------------------	------

3273	<i>Mikania cordifolia</i>	0.02
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3274	<i>Parthenocissus quinquefolia</i>	0.05
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3275	<i>Persea borbonia</i>	0.05
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3276	<i>Pinus elliottii</i>	0.24			
3277	<i>Psilotum nudum</i>		0.09		
3278	<i>Pteridium aquilinum</i>	0.44			
3279	<i>Quercus laurifolia</i>	0.03			
3280	<i>Rhynchosia cineria</i>	0.06			
3281	<i>Sabal palmetto</i>		0.01		
3282	<i>Schinus terebinthifolius</i>	0.07		0.07	
3283	<i>Smilax auriculata</i>	0.27			
3284	<i>Thelypteris normalis</i>	0.77			
3285	<i>Toxicodendron radicans</i>	4.11			
3286	<i>Vitis munsoniana</i>	<u>0.70</u>		<u>0.07</u>	
3287			7.46		0.07
3288					
3289					
3290					

3290 Site 16. North side of 56th Ave. NE, ca. 400' west of Merritt Blvd. Twp. 50S, Rng. 28E,
 3291 Sec. 9.
 3292
 3293 Date of cover measures: 6 July, 1997
 3294
 3295 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 3296
 3297 Community type: Mixed and cypress forest. This forest is fairly dense and diverse, and
 3298 does not appear to have been disturbed recently; road construction to the south has caused
 3299 much alteration in nearby areas. Recruitment of sabal palms into the shrub layer may
 3300 indicate a change in hydroperiod. The area has the appearance of a dehydrated slough
 3301 that is succeeding to a sabal palm hammock.
 3302 The tree canopy is complete and dominated by red maple and bald cypress. The
 3303 shrub layer is moderately dense (ca. 50% cover), and is largely made up of small sabal
 3304 palms. Ground cover is sparse (to ca. 20% cover), made up mostly of blechnum fern and
 3305 occasional vines. Soils are hydric, ca. 50% siliceous sand and 50% organic material with
 3306 ca. 3-10 cm leaf litter on the surface; limestone occurs ca. 14" below the soil surface. Fire
 3307 does not appear to have occurred here. Brazilian pepper is common in the area, but does
 3308 not dominate the hammock community.
 3309
 3310 Indicators of inundation: Within the sample quadrat area were four species of vascular
 3311 plants that are listed as Obligate wetland inhabitants, and four species that are listed as
 3312 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 3313 (Hydric Soil Field Indicators, lists for Chapter 62340). Bald cypress trees commonly
 3314 support buttresses and knees. Most of these structures appear old and without lichen
 3315 lines, suggesting neither recent nor prolonged inundation; however, occasional recent
 3316 growth of knees indicate recent hydric conditions or occasional inundation. Recruitment
 3317 of sabal palms into the shrub layer may indicate a change in hydroperiod.
 3318
 3319 Community type as interpreted by Leighty et al.(1954):
 3320 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
 3321 epiphytes are common. These areas are nearly level and covered with water all or most of
 3322 the year.
 3323
 3324 Soil type (Leighty et al., 1954): Cypress swamp.
 3325
 3326 Current Detailed Soil Descriptions
 3327
 3328 Series: Hallandale
 3329 Taxonomic Class: siliceous, hyperthermic, Lithic Psammaquents
 3330
 3331 A - 0 to 4 inches; very dark gray (10YR 3/1) mucky fine sand; weak fine granular
 3332 structure; very friable; many uncoated sand grains; common fine roots; clear wavy
 3333 boundary.
 3334 C - 4 to 8 inches; gray (10YR 5/1) fine sand; single grained; loose; common fine roots;
 3335 abrupt irregular boundary.
 3336 IIR - 8 inches; fractured limestone. Depth of rock is often less than 6 inches from the
 3337 surface.
 3338
 3339 Piezometer GPS location:
 3340
 3341 GPS Coordinates

3342		
3343	North	East
3344	Coordinate	Coordinate
3345		
3346		
3347		
3348		
3349	<u>Quadrat location:</u> The piezometer is established as the <u>southwestern</u> corner of the sample	
3350	quadrat area.	
3351		
3352		
3353	<u>Vascular Plant Species Encountered (Total = 25)</u>	
3354		
3355	<i>Acer rubrum</i>	red maple
3356	FACW	
3357	<i>Ampelopsis arborea</i>	pepper vine
3358	<i>Baccharis halimifolia</i>	saltbush
3359	FAC	
3360	<i>Blechnum serrulatum</i>	blechnum fern
3361	FACW	
3362	<i>Cephalanthus occidentalis</i>	button bush
3363	OBL	
3364	<i>Cynanchum scoparium</i>	--
3365	<i>Dichanthelium</i> sp.	grass
3366	<i>Ficus aurea</i>	strangler fig
3367	FAC	
3368	<i>Fraxinus caroliniana</i>	pop ash
3369	OBL	
3370	<i>Habenaria</i> sp.	orchid
3371	FACW	
3372	<i>Ilex cassine</i>	dahoon holly
3373	OBL	
3374	<i>Mikania scandens</i>	white vine
3375	<i>Persea borbonia</i>	red bay
3376	<i>Psychotria nervosa</i>	wild coffee
3377	FAC	
3378	<i>Psychotria sulzneri</i>	wild coffee
3379	FAC	
3380	<i>Quercus laurifolia</i>	laurel oak
3381	FACW	
3382	<i>Sabal palmetto</i>	sabal palm
3383	FAC	
3384	<i>Schinus terebinthifolius</i>	Brazilian pepper
3385	FAC	
3386	<i>Smilax auriculata</i>	greenbriar
3387	<i>Taxodium distichum</i>	bald cypress
3388	OBL	
3389	<i>Tillandsia fasciculata</i>	air plant
3390	<i>Tillandsia setacea</i>	air plant
3391	<i>Tillandsia usneoides</i>	air plant
3392	<i>Toxicodendron radicans</i>	poison ivy
3393	<i>Vitis munsoniana</i>	muscadine grape
3394		
3395		

3396

3397 Other Representative Plants Near, But not Within Quadrat

3398

3399 *Callicarpa americana*

beauty berry

3400 *Cornus foemina*

Florida dogwood

3401 FACW

3402 *Melothria pendula*

creeping cucumber

3403 *Mikania cordifolia*

--

3404 *Parthenocissus quinquefolia*

Virginia creeper

3405 *Phlebodium aureum*

golden serpent fern

3406

3407 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 3408 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 3409 randomly selected 10m transects within the sample quadrat. The category Epiphytes
 3410 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
 3411 ground, but contribute to the tree or shrub canopy layers.

3412

3413 SpeciesMeters intercepted

3414

3415 Tree Canopy

Exotics

3416 *Acer rubrum*

4.10

3417 *Quercus laurifolia*

0.23

3418 *Sabal palmetto*

4.75

3419 *Taxodium distichum*3.09

3420

12.17

3421 Shrubs3422 *Acer rubrum*

0.08

3423 *Ficus aurea*

0.10

3424 *Fraxinus caroliniana*

0.05

3425 *Quercus laurifolia*

0.03

3426 *Sabal palmetto*

4.25

3427 *Schinus terebinthifolius*0.170.17

3428

4.68

0.17

3429 Epiphytes3430 *Smilax auriculata*

0.03

3431 *Vitis munsoniana*0.48

3432

0.51

3433 Ground Cover3434 *Blechnum serrulatum*

1.32

3435 *Cephalanthus occidentalis*

0.02

3436 *Ilex cassine*

0.06

3437 *Psychotria sulzneri*

0.03

3438 *Sabal palmetto*

0.05

3439 *Smilax auriculata*

0.02

3440 *Toxicodendron radicans*

0.14

3441 *Vitis munsoniana*0.11

3442

1.75

3443

3444

Site 17. West of Patterson Blvd., ca. 200 m east of Merritt Canal, ca. 50 m north of 78th Ave SE. Twp. 50S, Rng. 28E, Sec. 23.

Date of cover measures: 22 July, 1997

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Bald cypress and red maple slough. This area appears to slough remnant that is stressed, possibly due to a change (decrease) in groundwater levels. A partial dominance by vines and other ruderal species, a mixture of hydric and mesic characters, and proximity to a major drainage structure further suggest that the area has changed during the past several years. The tree canopy is moderately dense (ca. 80% cover), and made up mostly of bald cypress, red maple, and Brazilian pepper. The shrub layer is sparse to moderate, mostly sabal palms with red bay, Brazilian pepper, and other occasional hardwoods. Ground cover is moderate, mostly blechnum ferns with vines such as poison ivy. Soils are mostly organic with sand; the amount of sand increases with depth. Ca. 5-7 cm leaf litter occurs above the soil surface, and limestone occurs ca. 50" below the surface. Fire has left some scars on sabal palm trunks; this appears to have been a low intensity fire that occurred several years previous. Exotic species: Brazilian pepper is common to dominant in the tree canopy and shrub layer; however, much of this was killed during the previous winter.

Indicators of inundation: Within the sample quadrat area were two species of vascular plants that are listed as Obligate wetland inhabitants, and five species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). The cypress trees in this area are almost all stressed or dead. Root masses of sabal palm trunks occur to about 60 cm above the soil surface. The soil is highly organic, but does not appear to be inundated for long periods, and may be succeeding to a more mesic community (see above: Community type).

Community type as interpreted by Leighty et al.(1954):

Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines; epiphytes are common. These areas are nearly level and covered with water all or most of the year.

Soil type (Leighty et al., 1954): Cypress swamp.

Current Detailed Soil Descriptions

Series: Boca

Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs

A - 0 to 3 inches; black (10YR 2/1) fine sand; weak fine granular structure; very friable; many fine and medium roots; clear wavy boundary.

E - 3 to 22 inches; mixed very pale brown (10YR 7/3) and grayish brown (10YR 5/2) fine sand; single grained; loose; the grayish brown is stripping (20%); clear wavy boundary.

Bt - 22 to 27 inches; dark gray (10YR 4/1) sandy clay loam; weak fine subangular structure; friable; medium calcium carbonate nodules throughout; abrupt irregular boundary.

3495 IIR - 27 inches; fractured limestone. The limestone is deeper than 20 inches from the
3496 surface.
3497
3498 Piezometer GPS location:
3499
3500 GPS Coordinates
3501
3502 North East
3503 Coordinate Coordinate
3504
3505
3506
3507
3508 Quadrat location: The piezometer is established as the southwestern corner of the sample
3509 quadrat area.
3510
3511 Vascular Plant Species Encountered (Total = 22)
3512
3513 *Acer rubrum* red maple
3514 FACW
3515 *Blechnum serrulatum* blechnum fern
3516 FACW
3517 *Carex* sp. sedge
3518 FACW
3519 *Cissus sicyoides* possum grape
3520 *Dichanthelium* sp. grass
3521 *Lantana camara* lantana
3522 *Oplismenus setarius* basket grass
3523 FAC
3524 *Parthenocissus quinquefolia* Virginia creeper
3525 *Persea borbonia* red bay
3526 *Psychotria sulzneri* wild coffee
3527 FAC
3528 *Rhynchospora inundata* horned beakrush
3529 OBL
3530 *Sabal palmetto* sabal palm
3531 FAC
3532 *Sambucus canadensis* elder
3533 FAC
3534 *Schinus terebinthifolius* Brazilian pepper
3535 FAC
3536 *Taxodium distichum* bald cypress
3537 OBL
3538 *Teucrium canadense* germander
3539 FACW
3540 *Tillandsia fasciculata* air plant
3541 *Tillandsia setacea* air plant
3542 *Tillandsia usneoides* air plant
3543 *Toxicodendron radicans* poison ivy
3544 *Vitis munsoniana* muscadine grape
3545 *Woodwardia virginica* chain fern
3546 FACW
3547

3548 Other Representative Plants Near, But not Within Quadrat

3549		
3550	<i>Callicarpa americana</i>	beauty berry
3551	<i>Cynanchum scoparium</i>	--
3552	<i>Habenaria</i> sp.	orchid
3553	FACW	
3554	<i>Passiflora suberosa</i>	wild passion vine
3555	<i>Phlebodium aureum</i>	golden serpent fern
3556	<i>Vittaria lineata</i>	shoestring fern

3557

3558

3559 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 3560 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 3561 randomly selected 10m transects within the sample quadrat. The category Epiphytes
 3562 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
 3563 ground, but contribute to the tree or shrub canopy layers.

3564

3565 Species Meters intercepted

3566

3567 Tree Canopy

3568	<i>Acer rubrum</i>	4.55	Exotics
3569	<i>Persea borbonia</i>	1.51	
3570	<i>Sambucus canadensis</i>	0.40	
3571	<i>Schinus terebinthifolius</i>	1.69	1.69
3572	<i>Taxodium distichum</i>	<u>2.70</u>	
3573		10.85	1.69

3574

3575 Shrubs

3576 *Sabal palmetto* 3.69

3577 3.69

3578 Epiphytes

3578	<i>Parthenocissus quinquefolia</i>	0.53	
3579	<i>Toxicodendron radicans</i>	0.24	
3580	<i>Vitis munsoniana</i>	<u>1.51</u>	
3581		3.88	

3582

3583 Ground Cover

3583	<i>Blechnum serrulatum</i>	0.96	
3584	<i>Carex</i> sp.	0.10	
3585	<i>Cissus sicyoides</i>	0.03	
3586	<i>Lantana camara</i>	0.03	
3587	<i>Parthenocissus quinquefolia</i>	0.52	
3588	<i>Persea borbonia</i>	0.12	
3589	<i>Rhynchospora inundata</i>	0.32	
3590	<i>Sabal palmetto</i>	0.48	
3591	<i>Sambucus canadensis</i>	0.04	
3592	<i>Schinus terebinthifolius</i>	0.28	0.28
3593	<i>Toxicodendron radicans</i>	0.35	
3594	<i>Vitis munsoniana</i>	0.39	
3595	<i>Woodwardia virginica</i>	<u>0.26</u>	
3596		3.88	0.28

3597

3598

Site 18. West of Everglades Blvd., north of SE 120 St. Twp. 31S, Rng. 28E, Sec. 19.

Date of cover measures: 20 May, 1997

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Sand (Muhly) Prairie. This prairie is dominated by graminoids and herbs that form about 70% ground cover. Periphyton is not common, but small colonies of algae occasionally exist in open areas. Substrate is siliceous sand that is evident between the grass and sedge tufts. Solitary sabal palms and bald cypress occur at wide distances. The prairie is fairly large and is surrounded by cypress sloughs.

Additional information on this community: Notes from Burch (1996).

Fire burned through this area during early January, 1996. This fire almost completely eliminated vegetation on the site, leaving occasional dead stems on nearly bare, dry sand. Ground cover is dry and generally dead or inactive during the winter months. Soils are sandy throughout the area, and soil surfaces are dry throughout these months. During the rainy season, some ponding of water may occur along the northern edges of the roads that transect the prairie. The open, grassy areas that are part of the wetland community mosaic here, appear to be physiognomically similar to marl prairies, also common in this vicinity.

Drainage in the area is likely to have affected this system, as the sandy substrates appear not to retain much water, and may become seasonally dry quickly. Nearby drainage canals (the Miller Blvd. Canal about 1 km to the west, and the Lynch Blvd. Canal about 0.5 km to the south) are likely to affect the hydrology of this area. These canals have probably contributed to the lack of water in nearby communities that have retained many characters of wetlands (e. g., cypress sloughs, wet prairies).

Indicators of inundation: Within the sample quadrat area were five species of vascular plants that are listed as Obligate wetland inhabitants, and three species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees.

Soil type (Leighty et al., 1954): Ochopée marl, deep phase.

Current Detailed Soil Descriptions

Series: Pineda

Taxonomic Class: Loamy, siliceous, hyperthermic, Arenic Glossaqualfs

A - 0 to 3 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; very friable; many uncoated sand grains; strongly effervescent; many fine roots; clear wavy boundary.

3646 E - 3 to 20 inches; greenish gray (10Y 5/1) fine sand; single grained; loose; weakly
 3647 effervescent; few fine roots; gradual wavy boundary
 3648 Bw - 20 to 40 inches; pale brown (10YR 6/3) fine sand; single grained; loose; abrupt
 3649 irregular boundary.
 3650 Bt&C 40 to 50 inches; gray (10YR 5/1) loamy fine sand and light gray (10YR 7/1) fine
 3651 sand; weak fine subangular blocky structure; friable; abrupt irregular boundary.
 3652 IIR 50 inches; fractured limestone. Limestone is usually greater than 40 inches from the
 3653 surface.

3654

3655

3656 Piezometer GPS location:

3657

3658 GPS Coordinates

3659

3660 North 2877838.67

East 445759.84

3661

3662

3663 Quadrat location: The piezometer is established as the Southwestern corner of the sample
 3664 quadrat area.

3665

3666

3667 Vascular Plant Species Encountered (Total = 15)

3668

3669 *Andropogon glomeratus* bushybeard bluestem

3670 FACW

3671 *Cladium jamaicense* sawgrass

3672 OBL

3673 *Dichanthelium* sp. grass

3674 *Dichondra carolinensis* pony foot

3675 FAC

3676 *Dichromena colorata* white-top sedge

3677 FACW

3678 *Eragrostis* sp. lovegrass

3679 FAC

3680 *Flaveria linearis* yellow-top

3681 FACW

3682 *Ipomoea sagittata* morning glory

3683 *Linum medium* yellow flax

3684 FAC

3685 *Muhlenbergia capillaris* muhly grass

3686 OBL

3687 *Panicum tenerum* bluejoint panicum

3688 OBL

3689 *Paspalum monostachyum* gulfcoast paspalum

3690 OBL

3691 *Polygala balduinii* --

3692 *Rhynchospora divergens* beakrush

3693 OBL

3694 *Schizachyrium rhizomatum* south Florida bluestem

3695 FAC

3696

3697 Other Representative Plants Near, But not Within Quadrat

3698
 3699
 3700 Additional information on this community: Vascular plant species list compiled during
 3701 1995, 1996 from Burch (1996).
 3702

3703 Species Noted

3704		
3705	<i>Aster subulatus</i>	aster
3706	<i>Bletia purpurea</i>	pine pink
3707	<i>Borreria terminalis</i>	--
3708	<i>Buchnera floridana</i>	blueheart
3709	<i>Calopogon multiflorus</i>	grass-pink
3710	<i>Cassytha filiformis</i>	love vine
3711	<i>Cirsium horridulum</i>	thistle
3712	<i>Cladium jamaicense</i>	sawgrass
3713	<i>Coreopsis leavenworthii</i>	--
3714	<i>Dichondra caroliniensis</i>	pony-foot
3715	<i>Dichromena colorata</i>	white-top sedge
3716	<i>Eupatorium mikanioides</i>	semaphore eupatorium
3717	<i>Euthamia minor</i>	--
3718	<i>Flaveria linearis</i>	flaveria
3719	<i>Hymenocallis palmeri</i>	spider lilly
3720	<i>Hyptis alata</i>	bushmint
3721	<i>Juncus scirpoides</i>	rush
3722	<i>Linum floridanum</i>	yellow flax
3723	<i>Ludwigia</i> sp.	--
3724	<i>Muhlenbergia capillaris</i>	muhly grass
3725	<i>Myrica cerifera</i>	wax myrtle
3726	<i>Panicum hemitomom</i>	maidencane
3727	<i>Paspalum</i> sp.	grass
3728	<i>Piriqueta caroliniana</i>	--
3729	<i>Pluchea odorata</i>	fleabane
3730	<i>Polygala balduinii</i>	bachelor's buttons
3731	<i>Polygala grandiflora</i>	candyroot
3732	<i>Rhynchospora microcarpa</i>	sedge
3733	<i>Sabal palmetto</i>	sabal palm
3734	<i>Sabatia grandiflora</i>	sabatia
3735	<i>Samolus ebracteatus</i>	pimpernel
3736	<i>Serenoa repens</i>	saw palmetto
3737	<i>Sisyrinchium</i> sp.	yellow-eyed grass
3738	<i>Spiranthes torta</i>	ladies' tresses
3739	<i>Stillingia aquatica</i>	corkwood
3740	<i>Taxodium distichum</i>	bald cypress
3741	<i>Xyris caroliniana</i>	yellow-eyed grass

3742
 3743
 3744 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 3745 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 3746 randomly selected 10m transects within the sample quadrat.
 3747

3748 Species Meters intercepted

3749
 3750 Tree Canopy
 3751

3752	<u>Shrubs</u>	
3753		
3754	<u>Ground Cover</u>	
3755	<i>Andropogon glomeratus</i>	0.02
3756	<i>Cladium jamaicense</i>	0.14
3757	<i>Dichanthelium</i> sp.	0.03
3758	<i>Dichondra carolinensis</i>	0.01
3759	<i>Dichromena colorata</i>	0.01
3760	<i>Eragrostis</i> sp.	0.08
3761	<i>Flaveria linearis</i>	0.01
3762	<i>Ipomoea sagittata</i>	0.01
3763	<i>Linum medium</i>	0.02
3764	<i>Muhlenbergia capillaris</i>	4.81
3765	<i>Polygala balduinii</i>	0.05
3766	<i>Rhynchospora divergens</i>	0.03
3767	<i>Schizachyrium rhizomatum</i>	<u>1.66</u>
3768		6.96
3769		
3770		
3771		
3772		

3772 Site 19. South of SE 78 Ave., ca. 0.6 Km E of Everglades Blvd. Twp. 50S, Rng. 27E,
 3773 Sec. 25.
 3774
 3775 Date of cover measures: 20 May, 1997
 3776
 3777 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 3778
 3779 Community type: Hydric to mesic oak and sabal hammock. This is a densely forested
 3780 area dominated by laurel oaks and sabal palms that form a nearly complete to complete
 3781 canopy; cypress trees suggest occasional inundation. Epiphytes are common on oak
 3782 branches and sabal trunks. The shrub layer is sparse, mostly formed by small sabal palms.
 3783 Ground cover is moderately dense, dominated by blechnum ferns and occasional herbs.
 3784 Soil is mostly organics with about 2 cm of surface litter. Fire appears to have occurred
 3785 within the past 2-3 years.
 3786
 3787 Indicators of inundation: Within the sample quadrat area were two species of vascular
 3788 plants that are listed as Obligate wetland inhabitants, and two species that are listed as
 3789 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 3790 (Hydric Soil Field Indicators, lists for Chapter 62340).
 3791
 3792 Community type as interpreted by Leighty et al.(1954):
 3793 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
 3794 epiphytes are common. These areas are nearly level and covered with water all or most of
 3795 the year.
 3796
 3797 Soil type (Leighty et al., 1954): Cypress swamp.
 3798
 3799 Current Detailed Soil Descriptions
 3800
 3801 Series: Jupiter
 3802 Taxonomic Class: Sandy, siliceous, hyperthermic, Lithic Haplaquolls
 3803
 3804 A1 - 0 to 5 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure;
 3805 very friable; common fine roots; common fine black (N 2/0) mucky fine sand
 3806 accretions clear smooth boundary.
 3807 A2 - 5 to 12 inches; black (10YR 2/1) fine sand; weak fine granular structure; very
 3808 friable; few fine and medium roots; clear wavy boundary.
 3809 C1 - 12 to 20 inches; gray (10YR 5/1) fine sand; single grained; loose; gradual wavy
 3810 boundary.
 3811 C2 - 20 to 25 inches; light gray (10YR 7/1) fine sand; single grained; loose; abrupt
 3812 irregular boundary.
 3813 IIR - 25 inches; fractured limestone. Depth of rock within the pedon begins about 6
 3814 inches from the surface.
 3815
 3816
 3817 Piezometer GPS location:
 3818
 3819 GPS Coordinates
 3820
 3821 North 2886193.38 East 443950.59
 3822

3823
 3824 Quadrat location: The piezometer is established as the Northeastern corner of the sample
 3825 quadrat area.

3826
 3827
 3828 Vascular Plant Species Encountered (Total = 21)

3829		
3830	<i>Ampelopsis arborea</i>	pepper vine
3831	<i>Blechnum serrulatum</i>	blechnum fern
3832	FACW	
3833	<i>Cynanchum scoparium</i>	--
3834	<i>Dichanthelium</i> sp.	grass
3835	<i>Itea virginica</i>	Virginia willow
3836	OBL	
3837	<i>Mikania scandens</i>	white vine
3838	<i>Oeceoclades maculata</i>	orchid
3839	<i>Parthenocissus quinquefolia</i>	Virginia creeper
3840	<i>Phlebodium aureum</i>	golden serpent fern
3841	<i>Psychotria nervosa</i>	wild coffee
3842	FAC	
3843	<i>Quercus laurifolia</i>	laurel oak
3844	FACW	
3845	<i>Rapanea punctata</i>	myrsine
3846	FAC	
3847	<i>Sabal palmetto</i>	sabal palm
3848	FAC	
3849	<i>Smilax auriculata</i>	greenbriar
3850	<i>Taxodium distichum</i>	bald cypress
3851	OBL	
3852	<i>Tillandsia setacea</i>	air plant
3853	<i>Tillandsia utriculata</i>	air plant
3854	<i>Toxicodendron radicans</i>	poison ivy
3855	<i>Vitis aestivalis</i>	summer grape
3856	<i>Vitis munsoniana</i>	muscadine grape
3857	<i>Vittaria lineata</i>	shoestring fern

3858
 3859 Other Representative Plants Near, But not Within Quadrat

3860		
3861	<i>Callicarpa americana</i>	beauty berry
3862	<i>Fraxinus caroliniana</i>	pop ash
3863	OBL	
3864	<i>Persea borbonia</i>	red bay
3865	<i>Pilea microphylla</i>	clearweed
3866	FACW	
3867	<i>Psychotria sulzneri</i>	wild coffee
3868	FAC	

3869
 3870
 3871 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 3872 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 3873 randomly selected 10m transects within the sample quadrat. The category Epiphytes
 3874 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
 3875 ground, but contribute to the tree or shrub canopy layers.

3877	<u>Species</u>		<u>Meters intercepted</u>
3878			
3879	<u>Tree Canopy</u>		Exotics
3880	<i>Quercus laurifolia</i>	6.65	
3881	<i>Sabal palmetto</i>		0.23
3882	<i>Taxodium distichum</i>	<u>5.66</u>	
3883		12.54	
3884	<u>Shrubs</u>		
3885	<i>Rapanea punctata</i>	0.06	
3886	<i>Sabal palmetto</i>		5.32
3887	<i>Itea virginica</i>	0.26	
3888	<i>Quercus laurifolia</i>	<u>0.31</u>	
3889			5.95
3890	<u>Epiphytes</u>		
3891	<i>Tillandsia setacea</i>	0.26	
3892	<i>Vitis aestivalis</i>	<u>0.36</u>	
3893			0.62
3894	<u>Ground Cover</u>		
3895	<i>Ampelopsis arborea</i>	0.12	
3896	<i>Blechnum serrulatum</i>	1.11	
3897	<i>Cynanchum scoparium</i>		0.01
3898	<i>Dichanthelium</i> sp.	0.05	
3899	<i>Itea virginica</i>	0.20	
3900	<i>Parthenocissus quinquefolia</i>	0.09	
3901	<i>Psychotria nervosa</i>	0.02	
3902	<i>Quercus laurifolia</i>	0.03	
3903	<i>Rapanea punctata</i>	0.15	
3904	<i>Sabal palmetto</i>		0.73
3905	<i>Smilax auriculata</i>	<u>0.01</u>	
3906			2.52
3907			
3908			
3909			
3910			
3911			
3912			

3912 Site 20. Southeastern corner of DeSoto Blvd. and SE 132 Ave.
3913 Twp. 51S, Rng. 28E, Sec. 28.

3914
3915 Date of cover measures: 3 June, 1997.

3916
3917 Investigators: J. N. Burch, G. Hendricks, H. Yamataki

3918
3919 Community type: Cypress slough. This area contains many of the components commonly
3920 found in cypress or mixed cypress and hardwood slough communities, and is dominated
3921 by bald cypress with occasional hardwoods, such as laurel oaks, and sabal palms. The
3922 tree canopy is complete (100% cover). The shrub layer is moderate to sparse (30% cover),
3923 usually made up of small oaks, myrsine and wild coffee. Ground cover is moderately
3924 dense at about 70%, mostly blechnum fern. Epiphytes and vines are sparse. Dead cypress
3925 trees and their knees occur, but are not abundant. Substrate is 10-15 cm organic material
3926 over sand; subtending rock occurs ca. 30 inches below the surface. No evidence of recent
3927 fire was noted in this area. No exotic species were noted in this sample area.

3928
3929 Indicators of inundation: Within the sample quadrat area were five species of vascular
3930 plants that are listed as Obligate wetland inhabitants, and three species that are listed as
3931 Facultative wetland inhabitants by the Florida Department of Environmental Protection
3932 (Hydric Soil Field Indicators, lists for Chapter 62340). Dead cypress knees were about
3933 0.54 m (n=11) above the adjacent substrates; living cypress knees were about 0.41 m
3934 (n=11) above the adjacent substrates. Lichen lines on cypress buttresses were about 0.32
3935 m (n=18) above adjacent substrates. This community appears to be inundated part of the
3936 year.

3937
3938
3939 Community type as interpreted by Leighty et al.(1954):
3940 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
3941 epiphytes are common. These areas are nearly level and covered with water all or most of
3942 the year.

3943
3944 Soil type (Leighty et al., 1954): Cypress swamp.

3945
3946 Current Detailed Soil Descriptions

3947
3948 Series: Dania

3949 Taxonomic Class: Euic, hyperthermic, shallow Lithic Medisaprists

3950
3951 Oa - 5 to 0 inches; black (10YR 2/1) sapric muck; weak medium granular structure; less
3952 than 5% rubbed fiber; many fine and medium roots; clear wavy boundary.
3953 A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure;
3954 very friable; common fine roots; gradual wavy boundary.
3955 E - 3 to 7 inches; gray (10YR 5/1) fine sand; single grained; loose; common fine and
3956 medium roots; clear wavy boundary.
3957 Bt1 - 7 to 25 inches; light gray (10YR 7/1) loamy fine sand; weak fine subangular blocky
3958 structure; very friable; few coarse roots; gradual wavy boundary.
3959 Bt2 - 25 to 50 inches; light gray (10YR 7/1) sandy clay loam; weak fine subangular
3960 blocky structure; very friable; few coarse roots; abrupt irregular boundary.
3961 IIR - 50 inches; fractured limestone. Limestone is usually greater than 40 inches from the
3962 surface.

3963
3964 Piezometer GPS location:
3965
3966 GPS Coordinates
3967
3968 North 2875363.66 East 448837.12
3969
3970
3971
3972 Quadrat location: The piezometer is established as the Northwestern corner of the sample
3973 quadrat area.
3974
3975
3976 Vascular Plant Species Encountered (Total = 16)
3977
3978 *Blechnum serrulatum* blechnum fern
3979 FACW
3980 *Boehmeria cylindrica* false nettle
3981 OBL
3982 *Crinum americanum* swamp lilly
3983 OBL
3984 *Ficus aurea* strangler fig
3985 FAC
3986 *Fraxinus caroliniana* pop ash
3987 OBL
3988 *Hydrocotyle umbellata* pennywort
3989 FACW
3990 *Ilex cassine* dahoon holly
3991 OBL
3992 *Persea borbonia* red bay
3993 *Psilotum nudum* whisk fern
3994 *Psychotria nervosa* wild coffee
3995 FAC
3996 *Quercus laurifolia* laurel oak
3997 FACW
3998 *Rapanea punctata* myrsine
3999 FAC
4000 *Sabal palmetto* sabal palm
4001 FAC
4002 *Taxodium distichum* bald cypress
4003 OBL
4004 *Tillandsia usneoides* Spanish moss
4005 *Toxicodendron radicans* poison ivy
4006
4007 Other Representative Plants Near, But not Within Quadrat
4008
4009 *Annona glabra* pond apple
4010 OBL
4011 *Campyloneurum phyllitidis* strap fern
4012 *Cynanchum scoparium* --
4013 *Dichanthelium* sp. grass
4014 *Parthenocissus quinquefolia* Virginia creeper
4015 *Phlebodium aureum* serpent fern
4016 *Smilax auriculata* greenbriar

4017	<i>Tillandsia fasciculata</i>	cardinal air plant	
4018	<i>Tillandsia setacea</i>	air plant	
4019			
4020	<u>Cover measures</u> : meters of transect line intercepts of vascular plant species within 10m X		
4021	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
4022	randomly selected 10m transects within the sample quadrat. The category <u>Epiphytes</u>		
4023	includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the		
4024	ground, but contribute to the tree or shrub canopy layers.		
4025			
4026	<u>Species</u>		<u>Meters intercepted</u>
4027			
4028	<u>Tree Canopy</u>		Exotics
4029	<i>Ficus aurea</i>	0.09	
4030	<i>Fraxinus caroliniana</i>	0.69	
4031	<i>Ilex cassine</i>	0.13	
4032	<i>Persea borbonia</i>	0.51	
4033	<i>Quercus laurifolia</i>	4.82	
4034	<i>Rapanea punctata</i>	0.66	
4035	<i>Sabal palmetto</i>		1.78
4036	<i>Taxodium distichum</i>	<u>9.78</u>	
4037		18.46	
4038	<u>Shrubs</u>		
4039	<i>Fraxinus caroliniana</i>	0.12	
4040	<i>Ilex cassine</i>	2.13	
4041	<i>Rapanea punctata</i>	0.05	
4042	<i>Psychotria nervosa</i>	0.43	
4043	<i>Sabal palmetto</i>		<u>0.69</u>
4044			3.42
4045	<u>Epiphytes</u>		
4046	<i>Toxicodendron radicans</i>	<u>0.35</u>	
4047			0.35
4048	<u>Ground Cover</u>		
4049	<i>Blechnum serrulatum</i>	7.06	
4050	<i>Crinum americanum</i>	0.24	
4051	<i>Ilex cassine</i>	0.02	
4052	<i>Rapanea punctata</i>	0.03	
4053	<i>Psychotria nervosa</i>	0.05	
4054	<i>Sabal palmetto</i>		0.13
4055	<i>Toxicodendron radicans</i>	<u>0.03</u>	
4056			7.56
4057			
4058			
4059			
4060			
4061			
4062			

4062 Site 21. ca. 100 m east of Patterson Blvd, ca. 50 m north of S. E. 112 Ave. Twp. 51S,
4063 Rng. 28E, Sec. 14.
4064
4065 Date of cover measures: 3 June, 1997.
4066
4067 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
4068
4069 Community type: Very stressed pine and cypress transitional forest. This area appears to
4070 have been an ecotonal pine and cypress community that has become stressed over the
4071 past several years. Almost all of the pine trees in the area are dead; juveniles appear to be
4072 recruiting sparsely. Most cypress trees are dead, and those living appear unhealthy. Sabal
4073 palms are actively becoming recruited into the community. This woodland has an open
4074 canopy (10-20% cover), dominated by pine or cypress trees, where they have survived;
4075 sabal palms are common. The shrub layer is mostly young sabal palms, with occasional
4076 wax myrtle and Brazilian pepper. Ground cover is graminoids and ruderals (20-30%
4077 cover), with bare sand common. Substrates are sand with little organic material; rock
4078 occurs ca. 12-15 in. below the soil surface. Fire appears to have occurred here about 2-5
4079 years previous. Brazilian pepper is common in this area, but appears to have been
4080 severely frozen during the previous winter.
4081
4082 Indicators of inundation: Within the sample quadrat area were four species of vascular
4083 plants that are listed as Obligate wetland inhabitants, and three species that are listed as
4084 Facultative wetland inhabitants by the Florida Department of Environmental Protection
4085 (Hydric Soil Field Indicators, lists for Chapter 62340). The area does not appear to have
4086 been flooded during the past several years.
4087
4088 Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage
4089 or ponded water in nearly level to slightly depressional areas. These are dominated by
4090 short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This
4091 area was identified by Leighty et al. as partly dominated by pine trees.
4092
4093 Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.
4094
4095 Current Detailed Soil Descriptions
4096
4097 Series: Hallandale
4098 Taxonomic Class: siliceous, hyperthermic, Lithic Psammaquents
4099
4100 A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very
4101 friable; common fine roots; clear smooth boundary.
4102 C1 - 3 to 10 inches; mixed very pale brown (10YR 7/3) and light gray (10YR 7/2) fine
4103 sand; single grained; loose; 10 - 20% light gray stripped areas; gradual wavy boundary.
4104 C2 - 10 to 17 inches; pale brown (10YR 6/3) fine sand; single grained; loose; abrupt
4105 irregular boundary.
4106 IIR - 17 inches; fractured limestone. Depth of rock within the pedon begins about 6
4107 inches from the surface.
4108
4109 Piezometer GPS location:
4110
4111 GPS Coordinates
4112
4113 North 2879535.03 East 452235.17

4114		
4115		
4116		
4117	<u>Quadrat location:</u> The piezometer is established as the <u>southeastern</u> corner of the sample	
4118	quadrat area.	
4119		
4120		
4121	<u>Vascular Plant Species Encountered (Total = 24)</u>	
4122		
4123	<i>Andropogon glomeratus</i>	bushybeard bluestem
4124	FACW	
4125	<i>Bidens alba</i>	beggar ticks
4126	FAC	
4127	<i>Buchnera americana</i>	blueheart
4128	<i>Callicarpa americana</i>	beauty berry
4129	<i>Cladium jamaicense</i>	sawgrass
4130	OBL	
4131	<i>Crotalaria rotundifolia</i>	rabbit bells
4132	<i>Dichanthelium</i> sp.	grass
4133	<i>Eupatorium capillifolium</i>	dog fennel
4134	FAC	
4135	<i>Eupatorium mikanioides</i>	semaphore eupatorium
4136	FACW	
4137	<i>Ipomoea sagittata</i>	morning glory
4138	<i>Iresine diffusa</i>	--
4139	<i>Lythrum alatum</i>	loosestrife
4140	OBL	
4141	<i>Malvastrum corchorifolium</i>	false mallow
4142	<i>Myrica cerifera</i>	wax myrtle
4143	FAC	
4144	<i>Parthenocissus quinquefolia</i>	Virginia creeper
4145	<i>Paspalum ciliatifolium</i>	grass
4146	<i>Paspalum monostachyum</i>	gulfcoast paspalum
4147	OBL	
4148	<i>Pentodon pentandrus</i>	--
4149	OBL	
4150	<i>Physalis viscosa</i>	ground cherry
4151	<i>Pluchea odorata</i>	fleabane
4152	FACW	
4153	<i>Rubus trivialis</i>	dewberry
4154	FAC	
4155	<i>Sabal palmetto</i>	sabal palm
4156	FAC	
4157	<i>Schinus terebinthifolius</i>	Brazilian pepper
4158	FAC	
4159	<i>Vitis munsoniana</i>	muscadine grape
4160		
4161		
4162	<u>Other Representative Plants Near, But not Within Quadrat</u>	
4163		
4164	<i>Ampelopsis arborea</i>	pepper vine
4165	<i>Baccharis halimifolia</i>	saltbush
4166	FAC	
4167	<i>Kosteletzkya virginica</i>	saltmarsh mallow

4168	OBL		
4169	<i>Phlebodium aureum</i>		golden serpent fern
4170	<i>Quercus virginiana</i>		live oak
4171	<i>Stipa sp.</i>		grass
4172			
4173			
4174	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
4175	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
4176	randomly selected 10m transects within the sample quadrat.		
4177			
4178	<u>Species</u>		<u>Meters intercepted</u>
4179			
4180	<u>Tree Canopy</u>		Exotics
4181	<i>Sabal palmetto</i>		<u>2.33</u>
4182			2.33
4183	<u>Shrubs</u>		
4184	<i>Sabal palmetto</i>		0.10
4185	<i>Callicarpa americana</i>	<u>0.23</u>	
4186			0.33
4187	<u>Ground Cover</u>		
4188	<i>Andropogon glomeratus</i>	0.06	
4189	<i>Bidens alba</i>	0.02	
4190	<i>Cladium jamaicense</i>	0.05	
4191	<i>Dichanthelium sp.</i>	0.02	
4192	<i>Ipomoea sagittata</i>	0.02	
4193	<i>Iresine diffusa</i>	0.03	
4194	<i>Malvastrum corchorifolium</i>	0.03	
4195	<i>Parthenocissus quinquefolia</i>	0.01	
4196	<i>Paspalum monostachyum</i>	1.09	
4197	<i>Pluchea odorata</i>	0.04	
4198	<i>Rubus trivialis</i>	0.02	
4199	<i>Sabal palmetto</i>		0.01
4200	<i>Toxicodendron radicans</i>	0.49	
4201	<i>Vitis munsoniana</i>	0.01	
4202			
4203	unk. herb		0.02
4204	unk. sedge	<u>0.01</u>	
4205			1.87
4206			
4207			
4208			
4209			
4210			
4211			

4211 Site 22. ca. 100 m north of S. E. 112 Ave., 1 mi, east of Patterson Blvd. Twp. 51S, Rng.
 4212 26E, Sec. 14.
 4213
 4214 Date of cover measures: 5 June, 1997
 4215
 4216 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 4217
 4218 Community type: Prairie with scattered trees. This is an area that appears to be
 4219 transitional between several nearby communities. It is primarily part of the prairie that
 4220 extends to the north, but also contains scattered slash pine, bald cypress and sabal palms.
 4221 Occasional Brazilian peppers suggest possible soil disturbance in the past; this
 4222 disturbance may have occurred with drainage or with grading for fire breaks. In the
 4223 vicinity of the sample quadrat, slash pines provide about 20% cover; shrubs are sparse.
 4224 Graminoid ground cover dominates the community, covering 70-80% of the area. Soils
 4225 are shallow sand with few organics. Rock occurs at 0-12" below the surface; limestone is
 4226 a common component of the surface, sometimes protruding several cm above the soil
 4227 surface. Fire appears to have burned the area within the past five years; much of the
 4228 nearby area burned within the past four months.
 4229
 4230 Indicators of inundation: Within the sample quadrat area were six species of vascular
 4231 plants that are listed as Obligate wetland inhabitants, and three species that are listed as
 4232 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 4233 (Hydric Soil Field Indicators, lists for Chapter 62340).
 4234
 4235
 4236 Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage
 4237 or ponded water in nearly level to slightly depressional areas. These are dominated by
 4238 short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This
 4239 area was identified by Leighty et al. as partly dominated by cypress trees.
 4240
 4241 Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.
 4242
 4243 Current Detailed Soil Descriptions
 4244
 4245 Series: Hallandale
 4246 Taxonomic Class: siliceous, hyperthermic, Lithic Psammaquents
 4247
 4248 A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very
 4249 friable; common fine roots; clear smooth boundary.
 4250 C1 - 3 to 10 inches; mixed pale brown (10YR 6/3) and gray (10YR 6/1) fine sand; single
 4251 grained; loose; 10 - 20% gray stripped areas; gradual wavy boundary.
 4252 C2 - 10 to 42 inches; pale brown (10YR 6/3) fine sand; single grained; loose; loamy
 4253 materials are within most voids abrupt irregular boundary.
 4254 IIR - 47 inches; fractured limestone. Depth of rock within the pedon begins about 6
 4255 inches from the surface.
 4256
 4257 Piezometer GPS location:
 4258
 4259 GPS Coordinates
 4260
 4261 North 2879598.27 East 452759.24
 4262

4263
 4264 Quadrat location: The piezometer is established as the southwestern corner of the sample
 4265 quadrat area.
 4266

4267
 4268 Vascular Plant Species Encountered (Total = 22)
 4269

4270	<i>Andropogon glomeratus</i>	bushybeard bluestem
4271	FAC	
4272	<i>Baccharis halimifolia</i>	saltbush
4273	FAC	
4274	<i>Cirsium horridulum</i>	thistle
4275	<i>Cladium jamaicense</i>	sawgrass
4276	OBL	
4277	<i>Crinum americanum</i>	swamp lily
4278	OBL	
4279	<i>Dichanthelium</i> sp.	grass
4280	<i>Eupatorium capillifolium</i>	dog fennel
4281	FAC	
4282	<i>Eupatorium mikanioides</i>	semaphore eupatorium
4283	FACW	
4284	<i>Hypericum mutilum</i>	--
4285	FACW	
4286	<i>Ipomoea sagittata</i>	morning glory
4287	<i>Kosteletzkya virginica</i>	saltmarsh mallow
4288	OBL	
4289	<i>Muhlenbergia capillaris</i>	muhly grass
4290	OBL	
4291	<i>Paspalum monostachium</i>	Gulfcoast paspalum
4292	OBL	
4293	<i>Physalis viscosa</i>	ground cherry
4294	<i>Pinus elliotii</i>	slash pine
4295	<i>Pluchea odorata</i>	fleabane
4296	FACW	
4297	<i>Sabal palmetto</i>	sabal palm
4298	FAC	
4299	<i>Schinus terebinthifolius</i>	Brazilian pepper
4300	FAC	
4301	<i>Sida cordifolia</i>	Indian mallow
4302	<i>Taxodium distichum</i>	bald cypress
4303	OBL	
4304	<i>Toxicodendron radicans</i>	poison ivy
4305	<i>Vitis munsoniana</i>	muscadine grape

4306
 4307
 4308 Other Representative Plants Near, But not Within Quadrat
 4309

4310	<i>Ampelopsis arborea</i>	pepper vine
4311	<i>Borreria verticillata</i>	--
4312	<i>Buchnera americana</i>	blueheart
4313	<i>Conoclinium coelestinum</i>	mist flower
4314	FAC	
4315	<i>Heliotropium polyphyllum</i>	pineland heliotrope
4316	FAC	

4317	<i>Hyptis alata</i>		bush mint		
4318	FACW				
4319	<i>Lantana camara</i>		lantana		
4320	<i>Mikania scandens</i>		--		
4321	<i>Myrica cerifera</i>		wax myrtle		
4322	FAC				
4323	<i>Parthenocissus quinquefolia</i>		Virginia creeper		
4324	<i>Setaria geniculata</i>		grass		
4325	FAC				
4326	<i>Smilax auriculata</i>		greenbriar		
4327					
4328	<u>Cover measures</u> : meters of transect line intercepts of vascular plant species within 10m X				
4329	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four				
4330	randomly selected 10m transects within the sample quadrat. The category <u>Epiphytes</u>				
4331	includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the				
4332	ground, but contribute to the tree or shrub canopy layers.				
4333					
4334	<u>Species</u>		<u>Meters intercepted</u>		
4335					
4336	<u>Tree Canopy</u>			Exotics	
4337	<i>Pinus elliotii</i>	<u>3.93</u>			
4338			3.93		
4339	<u>Shrubs</u>				
4340	<i>Baccharis halimifolia</i>	0.03			
4341	<i>Sabal palmetto</i>		0.95		
4342	<i>Schinus terebinthifolius</i>	<u>0.29</u>		<u>0.29</u>	
4343			1.27		0.29
4344	<u>Epiphytes</u>				
4345	<i>Toxicodendron radicans</i>	<u>0.01</u>			
4346			0.01		
4347	<u>Ground Cover</u>				
4348	<i>Cladium jamaicense</i>	0.03			
4349	<i>Dichanthelium</i> sp.	0.01			
4350	<i>Eupatorium capillifolium</i>	0.06			
4351	<i>Eupatorium mikanioides</i>	0.02			
4352	<i>Ipomoea sagittata</i>	0.12			
4353	<i>Muhlenbergia capillaris</i>	0.08			
4354	<i>Paspalum monostachium</i>	6.89			
4355	<i>Physalis viscosa</i>	0.04			
4356	<i>Pluchea odorata</i>	0.03			
4357	<i>Toxicodendron radicans</i>	<u>0.01</u>			
4358			7.29		
4359					
4360					
4361					
4362					
4363					
4364					
4365	Site 23. Northeastern corner of Patterson Blvd. and Southeast 116 Ave. Twp. 51S, Rng.				
4366	28E, Sec. 14.				
4367					
4368	<u>Date of cover measures</u> : 5 June, 1997				
4369					
4370	<u>Investigators</u> : J. N. Burch, G. Hendricks, H. Yamataki				

4371
4372 Community type: Disturbed (dehydrated) cypress slough. This area appears to be a
4373 former cypress slough that has been affected by a change (decrease) in water levels. The
4374 community is still dominated by cypress trees and other species common in mixed
4375 sloughs, but partial dominance by invasives occurs nearly throughout. Several dead
4376 cypress trees were noted in the area. The tree canopy is dense, and is dominated by bald
4377 cypress, with sabal palms and red maple. The shrub layer is very dense, but most of this
4378 is dead Brazilian pepper; saltbush and small sabal palms produce a moderate living shrub
4379 layer. Ground cover is moderately sparse (<50% cover) and made up of occasional
4380 sawgrass, ferns, and several vines. Soils are 2-4 cm organic litter over sand. Evidence of
4381 fires in this area was not noted. Remnant Brazilian pepper crowns are common to co-
4382 dominant in the tree canopy and shrub layers, but almost all of this is dead, a result of the
4383 previous winter's frost.
4384
4385 Indicators of inundation: Within the sample quadrat area were three species of vascular
4386 plants that are listed as Obligate wetland inhabitants, and five species that are listed as
4387 Facultative wetland inhabitants by the Florida Department of Environmental Protection
4388 (Hydric Soil Field Indicators, lists for Chapter 62340). Lichen lines were not evident on
4389 cypress or other tree trunks; no recently formed cypress knees were noted. Above-ground
4390 root masses of the oldest sabal palms were extended about 0.4 m above the surrounding
4391 substrate. The area does not appear to have received prolonged seasonal inundation
4392 within the past several years.
4393
4394 Community type as interpreted by Leighty et al.(1954):
4395 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
4396 epiphytes are common. These areas are nearly level and covered with water all or most of
4397 the year.
4398
4399 Soil type (Leighty et al., 1954): Cypress swamp.
4400
4401 Current Detailed Soil Descriptions
4402
4403 Series: Hallandale
4404 Taxonomic Class: siliceous, hyperthermic, Lithic Psammaquents
4405
4406 A1 - 0 to 3 inches; black (10YR 2/1) mucky fine sand; weak fine granular structure; very
4407 friable; common fine roots; clear smooth boundary.
4408 A2 - 3 to 8 inches; very dark gray (10YR 3/1) fine sand; single grained; loose; few fine
4409 roots; gradual wavy boundary.
4410 E - 8 to 15 inches; dark gray (10YR 4/1) fine sand; single grained; loose; clear wavy
4411 boundary.
4412 Bt - 15 to 20 inches; gray (10YR 5/1) loamy fine sand; weak fine subangular structure;
4413 very friable; abrupt irregular boundary.
4414 IIR - 20 inches; fractured limestone. Depth of rock within the pedon is less than 20
4415 inches from the surface.
4416
4417 Piezometer GPS location:
4418
4419 GPS Coordinates
4420
4421 North 2878790.71 East 452167.23

4422
4423
4424 Quadrat location: The piezometer is established as the northwestern corner of the sample
4425 quadrat area.

4426
4427
4428 Vascular Plant Species Encountered (Total = 23)
4429

4430	<i>Acer rubrum</i>	red maple
4431	FACW	
4432	<i>Ampelopsis arborea</i>	pepper vine
4433	<i>Andropogon virginicus</i>	broomsedge
4434	<i>Baccharis halimifolia</i>	saltbush
4435	FAC	
4436	<i>Blechnum serrulatum</i>	blechnum fern
4437	FACW	
4438	<i>Boehmeria cylindrica</i>	false nettle
4439	OBL	
4440	<i>Callicarpa americana</i>	beauty berry
4441	<i>Cladium jamaicense</i>	sawgrass
4442	OBL	
4443	<i>Cornus foemina</i>	Florida dogwood
4444	FACW	
4445	<i>Dichanthelium</i> sp.	grass
4446	<i>Hypericum mutilum</i>	--
4447	<i>Parthenocissus quinquefolia</i>	Virginia creeper
4448	<i>Persea borbonia</i>	red bay
4449	<i>Pluchea odorata</i>	fleabane
4450	FACW	
4451	<i>Psychotria sulzneri</i>	wild coffee
4452	<i>Quercus laurifolia</i>	laurel oak
4453	FACW	
4454	<i>Sabal palmetto</i>	sabal palm
4455	FAC	
4456	<i>Sambucus canadensis</i>	elder
4457	FAC	
4458	<i>Schinus terebinthifolius</i>	Brazilian pepper
4459	FAC	
4460	<i>Taxodium distichum</i>	bald cypress
4461	OBL	
4462	<i>Toxicodendron radicans</i>	poison ivy
4463	<i>Vitis aestivalis</i>	summer grape
4464	<i>Vitis munsoniana</i>	muscadine grape

4465
4466 Other Representative Plants Near, But not Within Quadrat
4467

4468 *Cephalanthus occidentalis* button bush
4469

4470 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
4471 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
4472 randomly selected 10m transects within the sample quadrat. The category Epiphytes
4473 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
4474 ground, but contribute to the tree or shrub canopy layers.
4475

4476	<u>Species</u>	<u>Meters intercepted</u>			
4477					
4478	<u>Tree Canopy</u>			Exotics	
4479	<i>Acer rubrum</i>		0.43		
4480	<i>Baccharis halimifolia</i>	1.02			
4481	<i>Cornus foemina</i>		1.29		
4482	<i>Persea borbonia</i>		1.88		
4483	<i>Quercus laurifolia</i>		0.06		
4484	<i>Sabal palmetto</i>		4.60		
4485	<i>Taxodium distichum</i>		<u>1.34</u>		
4486			10.62		
4487	<u>Shrubs</u>				
4488	<i>Baccharis halimifolia</i>	0.96			
4489	<i>Callicarpa americana</i>	0.12			
4490	<i>Cornus foemina</i>		0.66		
4491	<i>Quercus laurifolia</i>		0.08		
4492	<i>Sabal palmetto</i>		3.43		
4493	<i>Schinus terebinthifolius</i>		<u>0.24</u>	<u>0.24</u>	
4494			5.49		0.24
4495	<u>Epiphytes</u>				
4496	<i>Ampelopsis arborea</i>		1.33		
4497	<i>Toxicodendron radicans</i>		0.39		
4498	<i>Vitis aestivalis</i>	1.32			
4499	<i>Vitis munsoniana</i>		<u>0.18</u>		
4500			3.22		
4501	<u>Ground Cover</u>				
4502	<i>Ampelopsis arborea</i>		0.59		
4503	<i>Andropogon virginicus</i>		0.08		
4504	<i>Baccharis halimifolia</i>	0.01			
4505	<i>Blechnum serrulatum</i>		0.78		
4506	<i>Boehmeria cylindrica</i>	0.42			
4507	<i>Cladium jamaicense</i>		0.96		
4508	<i>Cornus foemina</i>		0.05		
4509	<i>Dichanthelium</i> sp.		0.02		
4510	<i>Parthenocissus quinquefolia</i>	0.20			
4511	<i>Pluchea odorata</i>		0.03		
4512	<i>Psychotria sulzneri</i>		0.09		
4513	<i>Schinus terebinthifolius</i>		0.12	0.12	
4514	<i>Toxicodendron radicans</i>		0.53		
4515	<i>Vitis aestivalis</i>	0.01			
4516	<i>Vitis munsoniana</i>		<u>0.04</u>		
4517			3.94		0.12
4518					
4519					
4520					

Site 24. ca. 40 m east of Merritt Blvd, 100 m north of S. E. 114 Ave. Twp. 51S, Rng. 28E, Sec. 15.

Date of cover measures: 4 June, 1997

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Disturbed cypress slough. This area appears to be a remnant cypress slough that has endured much stress through the past few decades. Cypress trees co-dominate, but much *Schinus* occurs in the shrub and tree layers; most of the *Schinus* was reduced by frost the previous winter. The community has low diversity and appears to have been dominated by *Schinus* before the previous winter freeze. Sabal palms are common. The shrub layer is dominated by *Schinus*; this also was reduced by winter frost. Ground cover is mostly blechnum fern, poison ivy, and occasional grasses, covering 10-20%. Fire scars occur on a few sabal palms; these appear to have been produced by either a low intensity fire or one that occurred several years ago. Soils are mostly organic over sand with ca. 3 cm litter on the surface; rock occurs ca. 20" below the surface. Brazilian pepper is common to dominant in the shrub and tree layers. Dead and downed cypress trees are common; several cypress trees have been cut, probably within the past five years.

Indicators of inundation: Within the sample quadrat area were two species of vascular plants that are listed as Obligate wetland inhabitants, and three species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). Cypress trees were buttressed, suggesting previous inundation, but no knees were noted. Sabal palm root masses were about 30 cm above the surrounding ground surface. This area does not appear to have been recently or regularly inundated.

Community type as interpreted by Leighty et al.(1954:
Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines; epiphytes are common. These areas are nearly level and covered with water all or most of the year.

Soil type (Leighty et al., 1954): Cypress swamp.

Current Detailed Soil Descriptions

Series: Boca

Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs

A - 0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; common fine roots; common medium black (10YR 2/1) mucky fine sand organic accretions; clear smooth boundary.

C - 3 to 25 inches; gray (10YR 5/1) fine sand; single grained; loose; abrupt irregular boundary.

IIR - 25 inches; fractured limestone. Depth of limestone is greater than 20 inches.

Piezometer GPS location:

GPS Coordinates

4572	North 2879133.51	East 450515.11
4573		
4574		
4575	<u>Quadrat location:</u> The piezometer is established as the <u>northwestern</u> corner of the sample	
4576	quadrat area.	
4577		
4578		
4579	<u>Vascular Plant Species Encountered (Total = 22)</u>	
4580		
4581	<i>Blechnum serrulatum</i>	blechnum fern
4582	FACW	
4583	<i>Boehmeria cylindrica</i>	false nettle
4584	OBL	
4585	<i>Baccharis halimifolia</i>	saltbush
4586	FAC	
4587	<i>Cornus foemina</i>	Florida dogwood
4588	FACW	
4589	<i>Dichanthelium</i> sp.	grass
4590	<i>Mikania cordifolia</i>	--
4591	<i>Mikania scandens</i>	--
4592	<i>Parthenocissus quinquefolia</i>	Virginia creeper
4593	<i>Persea borbonia</i>	red bay
4594	<i>Phlebodium aureum</i>	serpent fern
4595	<i>Psychotria sulzneri</i>	wild coffee
4596	FAC	
4597	<i>Sabal palmetto</i>	sabal palm
4598	FAC	
4599	<i>Sambucus canadensis</i>	elder
4600	FAC	
4601	<i>Schinus terebinthifolius</i>	Brazilian pepper
4602	FAC	
4603	<i>Solidago</i> sp.	goldenrod
4604	<i>Taxodium distichum</i>	bald cypress
4605	OBL	
4606	<i>Thelypteris normalis</i>	fern
4607	FACW	
4608	<i>Tillandsia fasciculata</i>	air plant
4609	<i>Tillandsia setacea</i>	air plant
4610	<i>Toxicodendron radicans</i>	poison ivy
4611	<i>Vitis aestivalis</i>	summer grape
4612	<i>Vittaria lineata</i>	shoestring fern
4613		
4614		
4615	<u>Other Representative Plants Near, But not Within Quadrat</u>	
4616		
4617	<i>Ambrosia artemesiifolia</i>	ragweed
4618	<i>Ampelopsis arborea</i>	pepper vine
4619	<i>Fraxinus caroliniana</i>	pop ash
4620	OBL	
4621	<i>Psychotria nervosa</i>	wild coffee
4622	FAC	
4623	<i>Quercus laurifolia</i>	laurel oak
4624	FACW	
4625	<i>Rapanea punctata</i>	myrsine

4626	FAC				
4627	<i>Smilax auriculata</i>		greenbriar		
4628	<i>Tillandsia balbisiana</i>		air plant		
4629	<i>Tillandsia usneoides</i>		air plant		
4630	<i>Vitis munsoniana</i>		muscadine grape		
4631					
4632					
4633	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X				
4634	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four				
4635	randomly selected 10m transects within the sample quadrat. The category <u>Epiphytes</u>				
4636	includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the				
4637	ground, but contribute to the tree or shrub canopy layers.				
4638					
4639	<u>Species</u>		<u>Meters intercepted</u>		
4640					
4641	<u>Tree Canopy</u>			Exotics	
4642	<i>Baccharis halimifolia</i>	1.00			
4643	<i>Cornus foemina</i>		2.72		
4644	<i>Persea borbonia</i>		0.36		
4645	<i>Schinus terebinthifolius</i>	2.17	2.17		
4646	<i>Sabal palmetto</i>		3.52		
4647	<i>Taxodium distichum</i>	<u>2.52</u>			
4648		12.29		2.17	
4649	<u>Shrubs</u>				
4650	<i>Cornus foemina</i>		0.83		
4651	<i>Schinus terebinthifolius</i>	<u>1.21</u>	<u>1.21</u>		
4652			2.04	1.21	
4653	<u>Epiphytes</u>				
4654	<i>Parthenocissus quinquefolia</i>	0.56			
4655	<i>Phlebodium aureum</i>		0.18		
4656	<i>Toxicodendron radicans</i>		1.37		
4657	<i>Vitis aestivalis</i>	0.84			
4658	<i>Vittaria lineata</i>	<u>0.08</u>			
4659			3.03		
4660	<u>Ground Cover</u>				
4661	<i>Blechnum serrulatum</i>		2.02		
4662	<i>Boehmeria cylindrica</i>	0.32			
4663	<i>Dichanthelium</i> sp.		0.03		
4664	<i>Mikania cordifolia</i>		0.03		
4665	<i>Mikania scandens</i>		0.02		
4666	<i>Parthenocissus quinquefolius</i>	0.05			
4667	<i>Psychotria sulzneri</i>		0.02		
4668	<i>Sambucus canadensis</i>		0.02		
4669	<i>Schinus terebinthifolius</i>		0.05	0.05	
4670	<i>Toxicodendron radicans</i>		1.96		
4671	<i>Vitis aestivalis</i>	<u>0.08</u>			
4672		12.99		0.05	
4673					
4674					
4675					
4676	Site 25. Southeastern corner Merritt Blvd. and Stewart Blvd. Twp. 51S, Rng. 28E, Sec. 3.				
4677					
4678	<u>Date of cover measures:</u> 5 June, 1997.				
4679					

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Disturbed oak and sabal palm hammock. This area appears to have been a sabal palm or sabal palm and oak hammock. The community appears to have been disturbed, and is now dominated by ruderal herbs, vines, and Brazilian pepper. Nearby road construction and spoil material may have caused some of this disturbance; drainage also appears to have altered the soils of the area. The tree canopy is dominated by sabal palms and occasional laurel oaks; Florida dogwood is very common. Shrubs are mostly small sabal palms and hardwoods. Ground cover is diverse, with grasses, herbs, and many vines, forming 30-50% cover. Soils are mucky fine sand subtending 6-8 cm leaf litter. Fire appears to have burned the area several years previous; no recent fires are evident. Brazilian pepper is common to dominant, but has been partly killed by the previous winter's frost.

Indicators of inundation: Within the sample quadrat area were two species of vascular plants that are listed as Obligate wetland inhabitants, and four species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). This area does not appear to be regularly inundated.

Community type as interpreted by Leighty et al.(1954):
Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines; epiphytes are common. These areas are nearly level and covered with water all or most of the year.

Soil type (Leighty et al., 1954): Cypress swamp.

Current Detailed Soil Descriptions

Series: Boca

Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs

A1 - 0 to 3 inches; black (10YR 2/1) mucky fine sand; weak fine granular structure; very friable; common fine roots; clear wavy boundary.

A2 - 3 to 8 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; common fine roots; clear wavy boundary.

E - 8 to 32 inches; gray (10YR 5/1) fine sand; single grained; loose; abrupt irregular boundary.

IIR - 32 inches; fractured limestone. Depth of rock is more than 20 inches from the surface.

Piezometer GPS location:

GPS Coordinates

North 2881818.57

East 450495.80

Quadrat location: The piezometer is established as the northeastern corner of the sample quadrat area.

4732	<u>Vascular Plant Species Encountered (Total = 33)</u>	
4733		
4734	<i>Ampelopsis arborea</i>	pepper vine
4735	<i>Andropogon virginicus</i>	broomsedge
4736	FAC	
4737	<i>Baccharis halimifolia</i>	saltbush
4738	FAC	
4739	<i>Berchemia scandens</i>	rattan vine
4740	<i>Blechnum serrulatum</i>	blechnum fern
4741	FACW	
4742	<i>Boehmeria cylindrica</i>	false nettle
4743	OBL	
4744	<i>Chamaesyce hypericifolia</i>	--
4745	<i>Cirsium horridulum</i>	thistle
4746	<i>Conyza canadensis</i>	dwarf horseweed
4747	<i>Cornus foemina</i>	Florida dogwood
4748	FACW	
4749	<i>Desmodium paniculatum</i>	--
4750	<i>Dichanthelium</i> sp.	grass
4751	<i>Erianthus giganteus</i>	plumegrass
4752	OBL	
4753	<i>Eupatorium capillifolium</i>	dog fennel
4754	FAC	
4755	<i>Flaveria linearis</i>	yellow-top
4756	FACW	
4757	<i>Galactea volubilis</i>	milk pea
4758	<i>Mikania scandens</i>	white vine
4759	<i>Parthenocissus quinquefolia</i>	Virginia creeper
4760	<i>Phlebodium aureum</i>	golden serpent fern
4761	<i>Psychotria nervosa</i>	wild coffee
4762	<i>Quercus laurifolia</i>	laurel oak
4763	FACW	
4764	<i>Rubus trivialis</i>	dewberry
4765	FAC	
4766	<i>Sabal palmetto</i>	sabal palm
4767	FAC	
4768	<i>Sambucus canadensis</i>	elder
4769	FAC	
4770	<i>Schinus terebinthifolius</i>	Brazilian pepper
4771	FAC	
4772	<i>Smilax auriculata</i>	greenbriar
4773	<i>Sporobolus</i> sp.	smutgrass
4774	<i>Stachytarpheta jamaicensis</i>	porterweed
4775	<i>Toxicodendron radicans</i>	poison ivy
4776	<i>Urena lobata</i>	Caesar weed
4777	<i>Vitis aestivalis</i>	summer grape
4778	<i>Vitis munsoniana</i>	muscadine grape
4779	<i>Vittaria lineata</i>	shoestring fern
4780		
4781		
4782		
4783	<u>Other Representative Plants Near, But not Within Quadrat</u>	
4784		
4785	<i>Aeschynomene americana</i>	--

4786	<i>Conoclinium coelestinum</i>		mist flower		
4787	FAC				
4788	<i>Cynanchum scoparium</i>		--		
4789	<i>Fraxinus caroliniana</i>	pop ash			
4790	OBL				
4791	<i>Hypericum mutilum</i>		--		
4792	<i>Lythrum alatum</i>		loosestrife		
4793	OBL				
4794	<i>Solidago</i> sp.		goldenrod		
4795	<i>Tillandsia usneoides</i>	air plant			
4796					
4797	<u>Cover measures</u> : meters of transect line intercepts of vascular plant species within 10m X				
4798	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four				
4799	randomly selected 10m transects within the sample quadrat. The category <u>Epiphytes</u>				
4800	includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the				
4801	ground, but contribute to the tree or shrub canopy layers.				
4802					
4803	<u>Species</u>		<u>Meters intercepted</u>		
4804					
4805	<u>Tree Canopy</u>			Exotics	
4806	<i>Baccharis halimifolia</i>	0.16			
4807	<i>Cornus foemina</i>		4.49		
4808	<i>Quercus laurifolia</i>	2.52			
4809	<i>Sabal palmetto</i>		2.57		
4810	<i>Schinus terebinthifolius</i>	<u>0.09</u>		<u>0.09</u>	
4811			9.83		0.09
4812	<u>Shrubs</u>				
4813	<i>Baccharis halimifolia</i>	0.20			
4814	<i>Cornus foemina</i>		0.73		
4815	<i>Quercus laurifolia</i>	0.15			
4816	<i>Sabal palmetto</i>		1.98		
4817	<i>Schinus terebinthifolius</i>	<u>0.62</u>		<u>0.62</u>	
4818			3.68		0.62
4819	<u>Epiphytes</u>				
4820	<i>Ampelopsis arborea</i>		1.04		
4821	<i>Smilax auriculata</i>		0.07		
4822	<i>Toxicodendron radicans</i>		0.13		
4823	<i>Vitis aestivalis</i>	<u>0.05</u>			
4824			1.29		
4825	<u>Ground Cover</u>				
4826	<i>Ampelopsis arborea</i>		0.92		
4827	<i>Andropogon virginicus</i>		0.01		
4828	<i>Berchemia scandens</i>		0.08		
4829	<i>Blechnum serrulatum</i>		0.09		
4830	<i>Boehmeria cylindrica</i>	0.02			
4831	<i>Chamaesyce hypericifolia</i>		0.02		
4832	<i>Desmodium paniculatum</i>		0.13		
4833	<i>Dichanthelium</i> sp.		0.33		
4834	<i>Erianthus giganteus</i>		0.01		
4835	<i>Mikania scandens</i>		0.01		
4836	<i>Parthenocissus quinquefolia</i>	0.02			
4837	<i>Rubus trivialis</i>	0.22			
4838	<i>Schinus terebinthifolius</i>		0.03		0.03
4839	<i>Smilax auriculata</i>		0.03		

4840	<i>Sporobolus indicus</i>		0.01		0.01	
4841	<i>Stachytarpheta jamaicensis</i>	0.02				
4842	<i>Toxicodendron radicans</i>		1.01			
4843	<i>Vitis munsoniana</i>		<u>0.02</u>		—	
4844				2.98		0.04

Site 26. Between SE 118 Ave. and SE 116 Ave., ca. 50 m E of Everglades Blvd. Twp. 31S, Rng. 28E, Sec. 18.

Date of cover measures: 20 May, 1997

Investigators: J. N. Burch, G. Hendricks, H. Yamataki

Community type: Sandy prairie ecotone. This area is largely a prairie dominated by graminoids (especially muhly grass) and herbs that form about 50-60% ground cover. However, small pines and cypress trees are common. Islands of oak hammock or saw palmetto occur near the sample area, suggesting significant differences in elevation or substrate types beneath these communities. The ecotonal nature of this area is not clear, as components of prairie, pine flatwoods, oak hammock, and cypress slough are found in the areas surrounding the sample quadrat. Periphyton is not common, but small colonies of algae (mostly cyanobacteria) occasionally exist in open areas. Substrate is siliceous sand that is evident between the grass and sedge tufts.

Indicators of inundation: Within the sample quadrat area were four species of vascular plants that are listed as Obligate wetland inhabitants, and seven species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This area was identified by Leighty et al. as partly dominated by cypress trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

Current Detailed Soil Descriptions

Series: Boca

Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs

A - 0 to 4 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; very friable; common fine roots; clear smooth boundary.

C1 - 4 to 20 inches; mixed very pale brown (10YR 7/3), gray (10YR 6/1), and light gray (10YR 7/2) fine sand; single grained; loose; 10 - 20% gray and light gray stripped areas; gradual wavy boundary.

C2 - 20 to 48 inches; pale brown (10YR 6/3) fine sand; single grained; loose; loamy materials are within most voids abrupt irregular boundary.

IIR - 48 inches; fractured limestone. Depth of rock within the pedon begins about 20 inches from the surface.

Piezometer GPS location:

GPS Coordinates

North 2878404.49

East 445864.22

4896 Quadrat location: The piezometer is established as the Southwestern corner of the sample
 4897 quadrat area.

4898

4899

4900 Vascular Plant Species Encountered (Total = 21)

4901

4902 *Andropogon glomeratus* bushybeard bluestem

4903 FACW

4904 *Bumelia celastrina* buckthorn

4905 FAC

4906 *Cladium jamaicense* sawgrass

4907 OBL

4908 *Crinum americanum* swamp lilly

4909 OBL

4910 *Dichanthelium* sp. grass

4911 *Eragrostis* sp. lovegrass

4912 FAC

4913 *Eryngium balduinii* snakeroot

4914 FAC

4915 *Eupatorium mikanoides* semaphore

4916 FACW

4917 *Eustachys glauca* grass

4918 FACW

4919 *Hypericum mutilum* hypericum

4920 FACW

4921 *Hyptis alata* bush mint

4922 FACW

4923 *Malvastrum corchorifolium* false mallow

4924 *Mitreola sessilifolia* miterwort

4925 FACW

4926 *Muhlenbergia capillaris* muhly grass

4927 OBL

4928 *Paspalum setaceum* low paspalum

4929 FAC

4930 *Pinus elliotii* slash pine

4931 *Pluchea odorata* fleabane

4932 FACW

4933 *Schizachyrium rhizomatum* south Florida bluestem

4934 FAC

4935 *Serenoa repens* saw palmetto

4936 *Taxodium distichum* bald cypress

4937 OBL

4938 *Vitis munsoniana* muscadine grape

4939

4940

4941 Other Representative Plants Near, But not Within Quadrat

4942

4943 *Blechnum serrulatum* blechnum fern

4944 FACW

4945 *Callicarpa americana* beauty berry

4946 *Ilex cassine* dahoon holly

4947 OBL

4948 *Lippia nodiflora* carpetweed

4949 *Lobelia paludosa* --

4950	FACW		
4951	<i>Myrica cerifera</i>		wax myrtle
4952	FAC		
4953	<i>Persea borbonia</i>		red bay
4954	<i>Phlebodium aureum</i>		serpent fern
4955	<i>Quercus laurifolia</i>		laurel oak
4956	FACW		
4957	<i>Rhus copallina</i>		sumac
4958	<i>Sabal palmetto</i>		sabal palm
4959	FAC		
4960	<i>Teucrium canadense</i>		germander
4961	FACW		
4962	<i>Toxicodendron radicans</i>		poison ivy
4963			
4964	<u>Cover measures</u> : meters of transect line intercepts of vascular plant species within 10m X		
4965	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
4966	randomly selected 10m transects within the sample quadrat.		
4967			
4968	<u>Species</u>		<u>Meters intercepted</u>
4969			
4970	<u>Tree Canopy</u>		
4971	<i>Pinus elliottii</i>	1.12	
4972	<i>Taxodium distichum</i>	<u>1.01</u>	
4973			2.13
4974	<u>Shrubs</u>		
4975	<i>Bumelia celastrina</i>	0.47	
4976	<i>Hypericum reductum</i>	0.29	
4977	<i>Sabal palmetto</i>		0.39
4978	<i>Serenoa repens</i>		<u>0.43</u>
4979			1.58
4980	<u>Ground Cover</u>		
4981	<i>Andropogon virginicus</i>	0.38	
4982	<i>Cladium jamaicense</i>	0.09	
4983	<i>Crinum americanum</i>	0.13	
4984	<i>Dichanthelium</i> sp.	0.83	
4985	<i>Eupatorium mikanooides</i>	0.01	
4986	<i>Eustachys glauca</i>	0.09	
4987	<i>Eragrostis</i> sp.	0.02	
4988	<i>Eryngium balduinii</i>	0.90	
4989	<i>Hyptis alata</i>	0.06	
4990	<i>Malvastrum corchorifolium</i>	0.05	
4991	<i>Mitreola sessilifolia</i>	0.01	
4992	<i>Muhlenbergia capillaris</i>	2.00	
4993	<i>Paspalum ciliaris</i>	0.01	
4994	<i>Pluchea odorata</i>	0.04	
4995	<i>Schizachyrium rhizomatium</i>	0.48	
4996	<i>Vitis munsoniana</i>	<u>0.06</u>	
4997			5.20
4998			
4999			
5000			
5001			
5002	Site 27. Half-way between 102 Ave. SE and 104 Ave SE, ca. 30 m east of Everglades		
5003	Blvd. Twp. 51S, Rng. 28E, Sec. 7.		

Date of cover measures: 16 July, 1997.

Investigators: J. N. Burch, G. Hendricks, H. Yamataki, T. Polizos, S. Polizos, E. Crosby.

Community type: Bald cypress slough, or cypress slough ecotone with prairie. This area supports many vines and other ruderal species, suggesting recovery from some disturbance. Bald cypress trees are common in the area, but are mostly dead or appear unhealthy. Young sabal palms are common in the area as recruits into the shrub layer and canopy; the community appears to be succeeding to a palm hammock. The tree canopy provides ca. 50% cover and is mostly sabal palms. The shrub layer is sparse to moderate (20-30% cover), and generally made up of small sabal palms, Brazilian pepper, and wax myrtle. Ground cover is largely sawgrass with vines, including poison ivy, and greenbriar. Soils are sand and marl with little organic material or leaf litter; limestone occurs about 30" below the soil surface. Fire appears to have occurred here within the past 5 yrs. Exotic species: Brazilian pepper is common.

Indicators of inundation: Within the sample quadrat area were three species of vascular plants that are listed as Obligate wetland inhabitants, and 10 species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340). Bald cypress trees are common, but stressed or dead throughout the area, suggesting that the community previously may have been inundated through part of the year. Root masses at the bases of old sabal palms occur to ca. 50 cm. above the soil surface. The area does not appear to have been inundated recently.

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This area was identified by Leighty et al. as partly dominated by cypress trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

Current Detailed Soil Descriptions

Series: Boca

Taxonomic Class: Loamy, siliceous, hyperthermic Arenic Ochraqualfs

A - 0 to 1 inch; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; common fine roots; clear smooth boundary.

C1 - 1 to 10 inches; dark grayish brown (10YR 4/2), and brown (10YR 5/3); fine sand; single grained; loose; 10 - 20% gray stripped areas; gradual wavy boundary.

C2 - 10 to 37 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; loamy materials are within most voids abrupt irregular boundary.

IIR - 37 inches; fractured limestone. Depth of rock within the pedon begins within 40 inches from the surface.

Piezometer GPS location:

5055	GPS Coordinates	
5056		
5057	North 2881304.97	East 445823.54
5058		
5059		
5060	<u>Quadrat location:</u> The piezometer is established as the <u>northwestern</u> corner of the sample	
5061	quadrat area.	
5062		
5063		
5064	<u>Vascular Plant Species Encountered (Total = 43)</u>	
5065		
5066	<i>Aeschnomene americana</i>	--
5067	<i>Ampelopsis arborea</i>	pepper vine
5068	<i>Andropogon glomeratus</i>	bushybeard bluestem
5069	FACW	
5070	<i>Andropogon virginicus</i>	broomsedge
5071	FAC	
5072	<i>Baccharis halimifolia</i>	saltbush
5073	FAC	
5074	<i>Blechnum serrulatum</i>	blechnum fern
5075	FACW	
5076	<i>Boehmeria cylindrica</i>	false nettle
5077	OBL	
5078	<i>Cirsium horridulum</i>	thistle
5079	<i>Cladium jamaicense</i>	sawgrass
5080	OBL	
5081	<i>Conoclinium coelestinum</i>	mist flower
5082	FAC	
5083	<i>Coreopsis leavenworthii</i>	tickseed
5084	FACW	
5085	<i>Cyperus</i> sp.	sedge
5086	FACW	
5087	<i>Cyperus globosus</i>	sedge
5088	FAC	
5089	<i>Desmodium paniculatum</i>	--
5090	<i>Dichanthelium</i> sp.	grass
5091	<i>Dichromena colorata</i>	white-top sedge
5092	FACW	
5093	<i>Eupatorium mikanioides</i>	semaphore eupatorium
5094	FACW	
5095	<i>Eustachys glauca</i>	grass
5096	FACW	
5097	<i>Hyptis alata</i>	bush mint
5098	FACW	
5099	<i>Imperata</i> sp.	cogon grass
5100	<i>Ipomoea indica</i>	morning glory
5101	<i>Iresine diffusa</i>	blood leaf
5102	<i>Lythrum alatum</i>	loosestrife
5103	OBL	
5104	<i>Malvastrum corchorifolium</i>	false mallow
5105	<i>Mikania scandens</i>	white vine
5106	<i>Myrica cerifera</i>	wax myrtle
5107	FAC	
5108	<i>Parthenocissus quinquefolia</i>	Virginia creeper

5109	<i>Paspalum ciliatifolium</i>	grass
5110	<i>Passiflora suberosa</i>	wild passion vine
5111	<i>Phlebodium aureum</i>	golden serpent fern
5112	<i>Pluchea odorata</i>	fleabane
5113	FACW	
5114	<i>Polygala grandiflora</i>	candyroot
5115	<i>Rubus trivialis</i>	dewberry
5116	FAC	
5117	<i>Sabal palmetto</i>	sabal palm
5118	FAC	
5119	<i>Schinus terebinthifolius</i>	Brazilian pepper
5120	FAC	
5121	<i>Smilax auriculata</i>	greenbriar
5122	<i>Sporobolus indicus</i>	smutgrass
5123	<i>Stipa</i> sp.	grass
5124	<i>Teucrium canadense</i>	germander
5125	FACW	
5126	<i>Toxicodendron radicans</i>	poison ivy
5127	<i>Urena lobata</i>	Caesar weed
5128	<i>Vitis munsoniana</i>	muscadine grape
5129	unk. orchid.	

5130

5131 Other Representative Plants Near, But not Within Quadrat

5132		
5133	<i>Galium</i> sp.	bedstraw
5134	<i>Gratiola hispida</i>	--
5135	FAC	
5136	<i>Hypericum tetrapetalum</i>	--
5137	FAC	
5138	<i>Ipomoea sagittata</i>	morning glory
5139	<i>Persea borbonia</i>	red bay
5140	<i>Phragmites australis</i>	reed
5141	OBL	
5142	<i>Physalis viscosa</i>	ground cherry
5143	<i>Solidago</i> sp.	goldenrod
5144		

5145 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
5146 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
5147 randomly selected 10m transects within the sample quadrat. The category Epiphytes
5148 includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the
5149 ground, but contribute to the tree or shrub canopy layers.

5150

5151	<u>Species</u>	<u>Meters intercepted</u>
5152		
5153	<u>Tree Canopy</u>	Exotics
5154	<i>Sabal palmetto</i>	<u>6.42</u>
5155		6.42
5156	<u>Shrubs</u>	
5157	<i>Baccharis halimifolia</i>	0.53
5158	<i>Myrica cerifera</i>	1.34
5159	<i>Sabal palmetto</i>	<u>1.62</u>
5160		3.49
5161	<u>Epiphytes</u>	
5162	<i>Phlebodium aureum</i>	0.35

5163	<i>Toxicodendron radicans</i>	0.15		
5164	<i>Vitis munsoniana</i>	<u>2.10</u>		
5165			2.60	
5166	<u>Ground Cover</u>			
5167	<i>Aeschnomene americana</i>	0.02		
5168	<i>Ampelopsis arborea</i>	0.34		
5169	<i>Andropogon glomeratus</i>	0.14		
5170	<i>Andropogon virginicus</i>	0.39		
5171	<i>Blechnum serrulatum</i>	0.22		
5172	<i>Boehmeria cylindrica</i>	0.05		
5173	<i>Cladium jamaicense</i>	0.14		
5174	<i>Conoclinium coelestinum</i>	0.07		
5175	<i>Dichanthelium</i> sp.	0.10		
5176	<i>Dichromena colorata</i>	0.06		
5177	<i>Eupatorium mikanioides</i>	0.12		
5178	<i>Eustachys glauca</i>	0.28		
5179	<i>Hyptis alata</i>	0.02		
5180	<i>Ipomoea indica</i>		0.01	
5181	<i>Iresine diffusa</i>	0.07		
5182	<i>Lythrum alatum</i>		0.01	
5183	<i>Mikania scandens</i>	0.02		
5184	<i>Myrica cerifera</i>	0.04		
5185	<i>Parthenocissus quinquefolia</i>	0.18		
5186	<i>Paspalum ciliatifolium</i>	0.02		
5187	<i>Passiflora suberosa</i>	0.02		
5188	<i>Pluchea odorata</i>	0.04		
5189	<i>Rubus trivialis</i>	0.03		
5190	<i>Sabal palmetto</i>		0.12	
5191	<i>Schinus terebinthifolius</i>	0.04		0.04
5192	<i>Smilax auriculata</i>	0.32		
5193	<i>Sporobolus indicus</i>	0.79		0.79
5194	<i>Teucrium canadense</i>	0.03		
5195	<i>Toxicodendron radicans</i>	1.00		
5196	<i>Urena lobata</i>	0.01		0.01
5197	<i>Vitis munsoniana</i>	<u>0.75</u>		
5198			5.45	0.84
5199				
5200				
5201				

Site 28c. Ca. 1.5 mi west of the western end of 86 Ave. SE. Twp. 50S, Rng. 27E, Sec. 34.

Date of cover measures: 18 August, 1997

Investigators: J. N. Burch, G. Hendricks, H. Yamataki, S. Durwachter.

Community type: Hydric pine flatwoods. This area is an ecotonal composite of hydric and mesic communities, with slash pine and palmetto flatwoods, hydric prairies, and bald cypress woodland. The sample area quadrat is located mostly in a hydric pine and prairie community. The tree canopy is sparse (ca. 10% cover), with occasional slash pines; bald cypress trees are common in the surrounding areas. The shrub layer is sparse with occasional small slash pines and saw palmettos. Ground cover is nearly complete, covering ca. 80%, mostly made up of graminoids with occasional herbs. Soils are siliceous sand with <1 cm organic material on the surface; limestone occurs ca. 40" below the soil surface. Fire appears to have occurred in the area within the past 5-10 yr, and has left slash pine trunks charred. Exotic species are not common in the area, but Brazilian pepper and carpetweed were found as ground cover components in the sample quadrat area.

Indicators of inundation: Within the sample quadrat area were six species of vascular plants that are listed as Obligate wetland inhabitants, and 11 species that are listed as Facultative wetland inhabitants by the Florida Department of Environmental Protection (Hydric Soil Field Indicators, lists for Chapter 62340).

Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage or ponded water in nearly level to slightly depressional areas. These are dominated by short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This area was identified by Leighty et al. as partly dominated by cypress trees.

Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

Current Detailed Soil Descriptions

Series: Pineda

Taxonomic Class: Loamy, siliceous, hyperthermic, Arenic Glossaqualfs

A - 0 to 4 inches; gray (10YR 5/1) fine sand; single grained; loose; many fine roots; clear wavy boundary.

E - 4 to 20 inches; very pale brown (10YR 7/3), light gray (10YR 7/2), and pale brown (10YR 6/3) fine sand; single grained; loose; 20% light gray streaking; gradual smooth boundary.

Bw1 - 20 to 30 inches; yellowish brown (10YR 5/8) fine sand; single grained; loose; clear wavy boundary.

Bw2 - 30 to 37 inches; light yellowish brown (10YR 6/4) fine sand; single grained; loose; clear irregular boundary.

Bt - 37 to 40 inches; gray (10YR 6/1) sandy clay loam; weak subangular blocky structure; very friable; abrupt irregular boundary.

IIR - 40 inches; fractured limestone. Depth of limestone within the pedon begins within 40 inches from the surface.

5252 Piezometer GPS location:

5253

5254 GPS Coordinates

5255

5256 North East
5257 Coordinate Coordinate

5258

5259

5260

5261

5262 Quadrat location: The piezometer is established as the southwestern corner of the sample
5263 quadrat area.

5264

5265

5266 Vascular Plant Species Encountered (Total = 33)

5267

5268 *Agalinis purpurea* false foxglove

5269 FACW

5270 *Amphicarpum muhlenbergianum* blue maidencane

5271 FACW

5272 *Andropogon glomeratus* bushybeard bluestem

5273 FACW

5274 *Andropogon virginicus* broomsedge

5275 FAC

5276 *Cassytha filiformis* love vine

5277 *Cirsium horridulum* thistle

5278 *Cladium jamaicense* sawgrass

5279 OBL

5280 *Cyperus haspan* sedge

5281 OBL

5282 *Dichanthelium* sp. grass

5283 *Dichondra carolinensis* pony foot

5284 FAC

5285 *Dichromena colorata* white-top sedge

5286 FACW

5287 *Eryngium balduinii* snakeroot

5288 FAC

5289 *Euphorbia polyphylla* spurge

5290 FACW

5291 *Gratiola hispida* --

5292 FAC

5293 *Heliotropium polyphyllum* pineland heliotrope

5294 FAC

5295 *Hypericum brachyphyllum* --

5296 FACW

5297 *Hyptis alata* bush mint

5298 FACW

5299 *Lippia nodiflora* carpetweed

5300 *Ludwigia microcarpa* --

5301 OBL

5302 *Mitreola sessilifolia* miterwort

5303 FACW

5304 *Muhlenbergia capillaris* muhly grass

5305 OBL

5306	<i>Myrica cerifera</i>	wax myrtle
5307	FAC	
5308	<i>Paspalum monostachyum</i>	gulfcoast paspalum
5309	OBL	
5310	<i>Pinus elliottii</i>	slash pine
5311	<i>Pluchea odorata</i>	fleabane
5312	FACW	
5313	<i>Polygala grandiflora</i>	candyroot
5314	<i>Rhynchospora pusilla</i>	beakrush
5315	FACW	
5316	<i>Sabal palmetto</i>	sabal palm
5317	FAC	
5318	<i>Sagittaria lancifolia</i>	duck potato
5319	OBL	
5320	<i>Schinus terebinthifolius</i>	Brazilian pepper
5321	FAC	
5322	<i>Serenoa repens</i>	saw palmetto
5323	<i>Setaria geniculata</i>	grass
5324	FAC	
5325	<i>Teucrium canadense</i>	germander
5326	FACW	

5327
5328 Other Representative Plants Near, But not Within Quadrat

5329		
5330	<i>Eupatorium capillifolium</i>	dog fennel
5331	FAC	
5332	<i>Lobelia paludosa</i>	--
5333	FACW	
5334	<i>Malvastrum corchorifolium</i>	false mallow
5335	<i>Proserpinaca pectinata</i>	mermaid weed
5336	OBL	
5337	<i>Stillingia aquatica</i>	corkwood
5338	OBL	
5339	<i>Taxodium distichum</i>	bald cypress
5340	OBL	
5341	<i>Tillandsia fasciculata</i>	air plant

5342
5343
5344 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
5345 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
5346 randomly selected 10m transects within the sample quadrat.

5347		
5348	<u>Species</u>	<u>Meters intercepted</u>
5349		
5350	<u>Tree Canopy</u>	Exotics
5351	<i>Pinus elliottii</i>	<u>2.23</u>
5352		2.23
5353	<u>Shrubs</u>	
5354	<i>Pinus elliottii</i>	0.25
5355	<i>Sabal palmetto</i>	0.51
5356	<i>Serenoa repens</i>	<u>0.23</u>
5357		0.99
5358	<u>Ground Cover</u>	
5359	<i>Agalinis purpurea</i>	0.01

5360	<i>Amphicarpum muhlenbergianum</i>	4.77		
5361	<i>Andropogon glomeratus</i>	0.07		
5362	<i>Cirsium horridulum</i>	0.05		
5363	<i>Cladium jamaicense</i>	0.05		
5364	<i>Cyperus haspan</i>		0.26	
5365	<i>Dichondra carolinensis</i>	0.02		
5366	<i>Dichromena colorata</i>	0.04		
5367	<i>Eryngium balduinii</i>	0.08		
5368	<i>Euphorbia polyphylla</i>	0.01		
5369	<i>Gratiola hispida</i>	0.02		
5370	<i>Hypericum brachyphyllum</i>	0.02		
5371	<i>Lippia nodiflora</i>	0.01	0.01	
5372	<i>Ludwigia microcarpa</i>	0.03		
5373	<i>Mitreola sessilifolia</i>	0.01		
5374	<i>Muhlenbergia capillaris</i>	0.09		
5375	<i>Paspalum monostachyum</i>	0.46		
5376	<i>Rhynchospora pusilla</i>	0.05		
5377	<i>Schinus terebinthifolius</i>	0.01	0.01	
5378	<i>Setaria geniculata</i>	0.01		
5379	<i>Teucrium canadense</i>	<u>0.13</u>		
5380			6.99	0.02
5381				
5382				
5383				

5383 Site 29c. Ca. 1.0 mi west of the western end of 86 Ave. SE. Twp. 50S, Rng. 27E, Sec. 34.
5384
5385
5386 This site is in private ownership and has not been surveyed.
5387
5388
5389
5390

5390 Site 30c. East side of Jane's Scenic Drive, at the pull-off for Royal Palm Hammock; ca.
 5391 50 m east of road. Twp. 51S, Rng. 29E, Sec. 28.
 5392
 5393 Date of cover measures: 22 July, 1997
 5394
 5395 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 5396
 5397 Community type: Mixed hardwood slough. This area is dominated by hardwoods with
 5398 occasional sabal palms and bald cypress. Large cypress stumps, apparently left from
 5399 logging ca. 50 years ago, suggest that the community formerly was dominated or co-
 5400 dominated by bald cypress trees. The tree canopy is moderately dense, providing ca. 70%
 5401 canopy cover. The shrub layer is sparse to moderately sparse (ca. 20% cover) and is
 5402 mostly small trees that are also found in the canopy. Ground cover is mostly emergent
 5403 herbs with occasional floating aquatics and juvenile trees or shrubs. These provide ca.
 5404 50% cover and are mostly found in open well lighted areas. Soils are organic muck. Fire
 5405 does not appear to have occurred recently in this area. Exotic species are not common in
 5406 the area, but water lettuce was noted in the sample quadrat area.
 5407
 5408 Indicators of inundation: Within the sample quadrat area were 11 species of vascular
 5409 plants that are listed as Obligate wetland inhabitants, and six species that are listed as
 5410 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 5411 (Hydric Soil Field Indicators, lists for Chapter 62340). This area was inundated with ca.
 5412 40 cm water on 22 July, 1997.
 5413
 5414 Community type as interpreted by Leighty et al.(1954):
 5415 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
 5416 epiphytes are common. These areas are nearly level and covered with water all or most of
 5417 the year.
 5418
 5419 Soil type (Leighty et al., 1954): Cypress swamp.
 5420
 5421 Current Detailed Soil Descriptions
 5422
 5423 Series: Dania
 5424 Taxonomic Class: Euic, hyperthermic, shallow Lithic Medisaprists
 5425
 5426 Oa - 0 to 8 inches; very dark grayish brown (10YR 3/2) muck; weak medium granular
 5427 structure; less than 5% rubbed fiber; many fine and medium roots; clear wavy boundary.
 5428 C - 8 to 35 inches; dark gray (10YR 4/1) fine sand and fine sandy loam; structureless;
 5429 loose; many medium and coarse roots; abrupt irregular boundary.
 5430 IIR - 35 inches; fractures limestone. Depth of limestone is variable and often above 20
 5431 inches.
 5432
 5433 Piezometer GPS location:
 5434
 5435 GPS Coordinates
 5436
 5437 North East
 5438 Coordinate Coordinate
 5439
 5440
 5441

5442		
5443	<u>Quadrat location:</u>	The piezometer is established as the <u>southwestern</u> corner of the sample
5444		quadrat area.
5445		
5446		
5447	<u>Vascular Plant Species Encountered (Total = 27)</u>	
5448		
5449	<i>Acer rubrum</i>	red maple
5450	FACW	
5451	<i>Annona glabra</i>	pond apple
5452	OBL	
5453	<i>Blechnum serrulatum</i>	blechnum fern
5454	FACW	
5455	<i>Boehmeria cylindrica</i>	false nettle
5456	OBL	
5457	<i>Campyloneurum phyllitidis</i>	strap fern
5458	<i>Cornus foemina</i>	Florida dogwood
5459	FACW	
5460	<i>Crinum americanum</i>	swamp lilly
5461	OBL	
5462	<i>Diodia virginiana</i>	button weed
5463	FACW	
5464	<i>Fraxinus caroliniana</i>	pop ash
5465	OBL	
5466	<i>Ilex cassine</i>	dahoon holly
5467	OBL	
5468	<i>Nephrolepis biserrata</i>	sword fern
5469	FAC	
5470	<i>Nymphaea odorata</i>	water lily
5471	OBL	
5472	<i>Parthenocissus quinquefolia</i>	Virginia creeper
5473	<i>Persea borbonia</i>	red bay
5474	<i>Pistia stratiotes</i>	water lettuce
5475	<i>Polygonum punctatum</i>	smartweed
5476	OBL	
5477	<i>Polypodium polypodioides</i>	resurrection fern
5478	<i>Pontederia cordata</i>	pickerel weed
5479	OBL	
5480	<i>Psychotria sulzneri</i>	wild coffee
5481	FAC	
5482	<i>Quercus laurifolia</i>	laurel oak
5483	FACW	
5484	<i>Rapanea punctata</i>	myrsine
5485	FAC	
5486	<i>Sagittaria graminea</i>	duck potato
5487	OBL	
5488	<i>Taxodium distichum</i>	bald cypress
5489	OBL	
5490	<i>Tillandsia fasciculata</i>	air plant
5491	<i>Tillandsia setacea</i>	air plant
5492	<i>Toxicodendron radicans</i>	poison ivy
5493	<i>Woodwardia virginica</i>	chain fern
5494	FACW	
5495		

5496			
5497	<u>Other Representative Plants Near, But not Within Quadrat</u>		
5498			
5499	<i>Ficus aurea</i>		strangler fig
5500	FAC		
5501	<i>Psychotria nervosa</i>		wild coffee
5502	FAC		
5503	<i>Roystonea elata</i>		royal palm
5504	FACW		
5505	<i>Sabal palmetto</i>		sabal palm
5506	FAC		
5507	<i>Tillandsia utriculata</i>	air plant	
5508	<i>Utricularia</i> sp.	bladderwort	
5509	OBL		
5510	<i>Vittaria lineata</i>	shoestring fern	
5511			
5512			
5513	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
5514	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
5515	randomly selected 10m transects within the sample quadrat. The category <u>Epiphytes</u>		
5516	includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the		
5517	ground, but contribute to the tree or shrub canopy layers.		
5518			
5519	<u>Species</u>		<u>Meters intercepted</u>
5520			
5521	<u>Tree Canopy</u>		Exotics
5522	<i>Acer rubrum</i>	0.56	
5523	<i>Annona glabra</i>		6.85
5524	<i>Cornus foemina</i>		0.63
5525	<i>Fraxinus caroliniana</i>	4.75	
5526	<i>Ilex cassine</i>	2.12	
5527	<i>Persea borbonia</i>	0.48	
5528	<i>Quercus laurifolia</i>	<u>0.44</u>	
5529		15.83	
5530	<u>Shrubs</u>		
5531	<i>Annona glabra</i>		1.28
5532	<i>Rapanea punctata</i>	<u>0.32</u>	
5533			1.60
5534	<u>Epiphytes</u>		
5535	<i>Nephrolepis biserrata</i>	0.02	
5536	<i>Toxicodendron radicans</i>	<u>0.25</u>	
5537			0.27
5538	<u>Ground Cover</u>		
5539	<i>Acer rubrum</i>	0.01	
5540	<i>Blechnum serrulatum</i>	2.76	
5541	<i>Boehmeria cylindrica</i>	0.32	
5542	<i>Crinum americanum</i>	0.05	
5543	<i>Nephrolepis biserrata</i>	0.02	
5544	<i>Nymphaea odorata</i>	0.30	
5545	<i>Pistia stratiotes</i>	0.06	
5546	<i>Polygonum punctatum</i>		0.24
5547	<i>Pontederia cordata</i>	0.01	
5548	<i>Psychotria sulzneri</i>	0.07	
5549	<i>Sagittaria graminea</i>	0.03	

5550	<i>Woodwardia virginica</i>	<u>0.17</u>	
5551			4.02
5552			
5553			

5553 Site 31c. North side of Jane's Scenic Drive, 2.5 miles north-northwest of Copeland;
 5554 northeastern side of the turn at which the road takes a westerly heading; ca. 100 m
 5555 northeast of road. Twp. 52S, Rng. 29E, Sec. 1.
 5556
 5557 Date of cover measures: 22 July, 1997
 5558
 5559 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
 5560
 5561 Community type: This area is a marl prairie dominated by sawgrass and other graminoids
 5562 with several emergent herbs. Occasional shrubs and hatrack cypress occur near the
 5563 sample quadrat area, and hardwood tree islands occur 300-500 m to the north and east.
 5564 Ground cover is diverse and moderately dense, providing 80-90% cover. Surface water
 5565 ca. 10 cm deep occurred on 22 July, 1997. Soils are marl with little or no organic material
 5566 included, and little or no detrital mantle. This area burned ca. 1.5 yr previous. Exotic
 5567 species were not noted in the sample quadrat or immediately surrounding areas.
 5568
 5569 Indicators of inundation: Within the sample quadrat area were nine species of vascular
 5570 plants that are listed as Obligate wetland inhabitants, and six species that are listed as
 5571 Facultative wetland inhabitants by the Florida Department of Environmental Protection
 5572 (Hydric Soil Field Indicators, lists for Chapter 62340). Surface water ca. 10 cm deep
 5573 occurred on 22 July, 1997.
 5574
 5575 Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage
 5576 or ponded water in nearly level to slightly depressional areas. These are dominated by
 5577 short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This
 5578 area was identified by Leighty et al. as partly dominated by cypress trees.
 5579
 5580 Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.
 5581
 5582 Current Detailed Soil Descriptions
 5583
 5584 Series: Ochopee
 5585 Taxonomic Class: Coarse-loamy, mixed (calcareous), hyperthermic Lithic Haplaquepts
 5586
 5587 Oa - 0 to 1 inch; dark gray (10YR 4/1) muck; structureless; loose; common fine shell
 5588 fragments and periphyton; clear smooth boundary.
 5589 Bk - 1 to 7 inches; gray (10YR 6/1) silt loam; structureless; loose; many fine roots; clear
 5590 wavy boundary.
 5591 C1 - 7 to 30 inches; gray fine sandy loam; structureless; loose; gradual wavy boundary.
 5592 C2 - 30 to 40 inches; mixed light gray (10YR 7/1) and white (10YR 8/1) fine sand; single
 5593 grained; loose; abrupt irregular boundary.
 5594 IIR - 40 inches; fractured limestone. Most limestone is above 6 inches from the surface.
 5595
 5596
 5597 Piezometer GPS location:
 5598
 5599 GPS Coordinates
 5600
 5601 North East
 5602 Coordinate Coordinate
 5603
 5604

5605
 5606 Quadrat location: The piezometer is established as the southeastern corner of the sample
 5607 quadrat area.
 5608

5609
 5610 Vascular Plant Species Encountered (Total = 19)
 5611

5612	<i>Agalinis purpurea</i>	false foxglove
5613	FACW	
5614	<i>Bacopa caroliniana</i>	hyssop
5615	OBL	
5616	<i>Cladium jamaicense</i>	sawgrass
5617	OBL	
5618	<i>Crinum americanum</i>	swamp lilly
5619	OBL	
5620	<i>Cyperus haspan</i>	sedge
5621	OBL	
5622	<i>Dichanthelium</i> sp.	grass
5623	<i>Dichondra carolinensis</i>	pony foot
5624	FAC	
5625	<i>Dichromena colorata</i>	white-top sedge
5626	FACW	
5627	<i>Erianthus giganteus</i>	plumegrass
5628	OBL	
5629	<i>Eupatorium mikanioides</i>	semaphore eupatorium
5630	FACW	
5631	<i>Hyptis alata</i>	bush mint
5632	FACW	
5633	<i>Ludwigia alata</i>	--
5634	OBL	
5635	<i>Mikania scandens</i>	white vine
5636	<i>Panicum stipitatum</i>	grass
5637	<i>Panicum virgatum</i>	grass
5638	FACW	
5639	<i>Paspalum monostachyum</i>	gulfcoast paspalum
5640	OBL	
5641	<i>Rhynchospora inundata</i>	horned beakrush
5642	OBL	
5643	<i>Rhynchospora pusilla</i>	beakrush
5644	FACW	
5645	<i>Sagittaria lancifolia</i>	duck potato
5646	OBL	

5647
 5648
 5649 Other Representative Plants Near, But not Within Quadrat
 5650

5651	<i>Elyonurus tripsacoides</i>	Panamerican balsamscale
5652	FACW	
5653	<i>Salix carolinina</i>	willow

5654
 5655
 5656 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
 5657 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
 5658 randomly selected 10m transects within the sample quadrat.

5659			
5660	<u>Species</u>		<u>Meters intercepted</u>
5661			
5662	<u>Tree Canopy</u>		Exotics
5663			
5664	<u>Shrubs</u>		
5665			
5666	<u>Ground Cover</u>		
5667	<i>Agalinis purpurea</i>	0.51	
5668	<i>Cladium jamaicense</i>	2.05	
5669	<i>Crinum americanum</i>	0.46	
5670	<i>Cyperus haspan</i>		0.03
5671	<i>Dichantherium</i> sp.	0.01	
5672	<i>Dichromena colorata</i>	0.02	
5673	<i>Erianthus giganteus</i>	0.07	
5674	<i>Eupatorium mikanioides</i>	0.01	
5675	<i>Hyptis alata</i>	0.14	
5676	<i>Ludwigia alata</i>		0.06
5677	<i>Mikania scandens</i>	0.09	
5678	<i>Panicum stipitatum</i>	0.09	
5679	<i>Panicum virgatum</i>	0.07	
5680	<i>Paspalum monostachyum</i>	3.39	
5681	<i>Rhynchospora inundata</i>	0.61	
5682	<i>Sagittaria lancifolia</i>	<u>0.70</u>	
5683			8.31
5684			
5685			
5686			

5686 Site 32c. East side of Jane's Scenic Drive, ca. 2.0 mi north of Copeland; ca. 100 m east of
5687 road. Twp. 52S, Rng. 29E, Sec. 1.

5688
5689 Date of cover measures: 23 July, 1997

5690
5691 Investigators: J. N. Burch, G. Hendricks, H. Yamataki

5692
5693 Community type: Cypress slough. This area is an ecotonal community with components
5694 common in cypress sloughs and in sawgrass prairies; bald cypress trees and sawgrass are
5695 the dominants. The tree canopy is nearly complete (ca. 90% cover), and made up of bald
5696 cypress with occasional sabal palms and hardwoods. The shrub layer is sparse (ca. 10%
5697 cover), made up of small bald cypress trees and hardwood shrubs. Ground cover is nearly
5698 complete and dominated by sawgrass with occasional emergent herbs. Soils are organic
5699 muck, and were inundated with ca. 20 cm surface water on 23 July, 1997. A few charred
5700 sabal palm trunks indicate that fire burned through the area, but this does not appear to
5701 have occurred recently. Brazilian pepper was noted in the quadrat sample area, but is not
5702 common.

5703
5704 Indicators of inundation: Within the sample quadrat area were six species of vascular
5705 plants that are listed as Obligate wetland inhabitants, and five species that are listed as
5706 Facultative wetland inhabitants by the Florida Department of Environmental Protection
5707 (Hydric Soil Field Indicators, lists for Chapter 62340).

5708
5709 Community type as interpreted by Leighty et al.(1954): Prairie with very slow drainage
5710 or ponded water in nearly level to slightly depressional areas. These are dominated by
5711 short grasses, sometimes with occasional hatrack cypress, slash pine, or other trees. This
5712 area was identified by Leighty et al. as partly dominated by cypress trees.

5713
5714
5715 Soil type (Leighty et al., 1954): Ochopee fine sandy marl, shallow phase.

5716
5717 Current Detailed Soil Descriptions

5718
5719 Series: Ochopee
5720 Taxonomic Class: Coarse-loamy, mixed (calcareous), hyperthermic Lithic Haplaquepts
5721
5722 Oa - 0 to 3 inch; black (10YR 2/1) muck; structureless; loose; less than 10% fibers after
5723 rubbing; clear smooth boundary.
5724 Bk - 3 to 8 inches; gray (10YR 6/1) silt loam; structureless; loose; many fine roots; clear
5725 wavy boundary.
5726 C - 8 to 40 inches; mixed light gray (10YR 7/1) and gray (10YR 6/1) fine sand; single
5727 grained; loose; abrupt irregular boundary.
5728 IIR - 40 inches; fractured limestone. Most limestone is above 8 inches from the surface.

5729
5730 Piezometer GPS location:

5731
5732 GPS Coordinates
5733
5734 North East
5735 Coordinate Coordinate
5736
5737

5738

5739

5740 Quadrat location: The piezometer is established as the southwestern corner of the sample
5741 quadrat area.

5742

5743

5744 Vascular Plant Species Encountered (Total = 23)

5745

5746 *Acer rubrum* red maple

5747 FACW

5748 *Annona glabra* pond apple

5749 OBL

5750 *Blechnum serrulatum* blechnum fern

5751 FACW

5752 *Boehmeria cylindrica* false nettle

5753 OBL

5754 *Cladium jamaicense* sawgrass

5755 OBL

5756 *Crinum americanum* swamp lilly

5757 OBL

5758 *Ficus aurea* strangler fig

5759 FAC

5760 *Hyptis alata* bush mint

5761 FACW

5762 *Ipomoea sagittata* morning glory

5763 *Mikania scandens* white vine

5764 *Myrica cerifera* wax myrtle

5765 FAC

5766 *Persea borbonia* red bay

5767 *Phlebodium aureum* golden serpent fern

5768 *Pluchea odorata* fleabane

5769 FACW

5770 *Polygala grandiflora* candyroot

5771 *Proserpinaca pectinata* mermaid weed

5772 OBL

5773 *Sabal palmetto* sabal palm

5774 FAC

5775 *Schinus terebinthifolius* Brazilian pepper

5776 FAC

5777 *Taxodium distichum* bald cypress

5778 OBL

5779 *Thelypteris normalis* fern

5780 FACW

5781 *Tillandsia fasciculata* air plant

5782 *Tillandsia utriculata* air plant

5783 *Vitis munsoniana* muscadine grape

5784

5785

5786 Other Representative Plants Near, But not Within Quadrat

5787

5788 *Bumelia celastrina* buckthorn

5789 FAC

5790 *Smilax laurifolia* greenbriar

5791

5792			
5793	<u>Cover measures:</u> meters of transect line intercepts of vascular plant species within 10m X		
5794	10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four		
5795	randomly selected 10m transects within the sample quadrat.		
5796			
5797	<u>Species</u>	<u>Meters intercepted</u>	
5798			
5799	<u>Tree Canopy</u>		Exotics
5800	<i>Myrica cerifera</i>	0.09	
5801	<i>Persea borbonia</i>	0.13	
5802	<i>Sabal palmetto</i>		2.75
5803	<i>Taxodium distichum</i>	<u>8.17</u>	
5804		11.14	
5805	<u>Shrubs</u>		
5806	<i>Taxodium distichum</i>	<u>0.05</u>	
5807			0.05
5808	<u>Ground Cover</u>		
5809	<i>Blechnum serrulatum</i>	0.52	
5810	<i>Boehmeria cylindrica</i>	0.03	
5811	<i>Cladium jamaicense</i>	8.51	
5812	<i>Crinum americanum</i>	1.33	
5813	<i>Hyptis alata</i>	0.06	
5814	<i>Ipomoea sagittata</i>	0.03	
5815	<i>Pluchea odorata</i>	0.33	
5816	<i>Proserpinaca pectinata</i>	<u>0.18</u>	
5817		10.99	
5818			
5819			
5820			

5820 Site 33c. South side of Janes Scenic drive, 2.8 miles north-northwest of Copeland, ca.
5821 200m after the road assumes a westerly heading; ca 150 m south of road. Twp. 52S, Rng.
5822 29E, Sec. 2.
5823
5824 Date of cover measures: 22 July, 1997
5825
5826 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
5827
5828 Community type: Mixed hydric hammock. This area is slightly higher than the
5829 surrounding mixed hardwood and cypress swamp; part of the sample quadrat area was
5830 inundated on 22 July, 1997. The tree canopy is dense, providing 100% cover, and is made
5831 up of mixed hardwoods with occasional bald cypress. The shrub layer is moderately
5832 sparse, covering ca. 30% of the area, and is made up of occasional shrubs with small
5833 sabal palms, and other small trees also found in the canopy. Ground cover is moderate
5834 (ca. 50% cover), made up of occasional shrubs with small sabal palms and other small
5835 trees also found in the canopy. Substrates have ca. 10 cm organic material over siliceous
5836 sand. Fire does not appear to have occurred recently in this area. Exotic species are not
5837 common in the hammock, but Caesar weed was noted in the quadrat sample area.
5838
5839 Indicators of inundation: Within the sample quadrat area were three species of vascular
5840 plants that are listed as Obligate wetland inhabitants, and three species that are listed as
5841 Facultative wetland inhabitants by the Florida Department of Environmental Protection
5842 (Hydric Soil Field Indicators, lists for Chapter 62340). Part of the sample quadrat area
5843 was inundated on 22 July, 1997.
5844
5845 Community type as interpreted by Leighty et al.(1954):
5846 Cypress swamp, dominated by cypress and other trees, shrubs, grasses, ferns and vines;
5847 epiphytes are common. These areas are nearly level and covered with water all or most of
5848 the year. This area was identified by Leighty et al. as partly dominated by cypress trees.
5849
5850
5851 Soil type (Leighty et al., 1954): Cypress swamp.
5852
5853 Current Detailed Soil Descriptions
5854
5855 Series: Jupiter
5856 Taxonomic Class: Sandy, siliceous, hyperthermic, Lithic Haplaquolls
5857
5858 A1 - 0 to 3 inches; black (10YR 2/1) mucky fine sand; weak fine granular structure; very
5859 friable; many fine and medium roots; clear wavy boundary.
5860 A2 - 3 to 8 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure;
5861 very friable; many fine and medium roots; clear wavy boundary.
5862 C - 8 - 17 inches; light gray (10YR 5/1) fine sand; single grained; loose; abrupt irregular
5863 boundary.
5864 IIR - 17 inches; fracture limestone. Most limestone within the pedon is less than 6 inches
5865 from the surface.
5866
5867 Piezometer GPS location:
5868
5869 GPS Coordinates
5870

5871		North	East
5872		Coordinate	Coordinate
5873			
5874			
5875			
5876	<u>Quadrat location:</u> The piezometer is established as the <u>southeastern</u> corner of the sample		
5877	quadrat area.		
5878			
5879	<u>Vascular Plant Species Encountered (Total = 22)</u>		
5880			
5881	<i>Annona glabra</i>		pond apple
5882	OBL		
5883	<i>Baccharis halimifolia</i>		saltbush
5884	FAC		
5885	<i>Blechnum serrulatum</i>		blechnum fern
5886	FACW		
5887	<i>Chrysobalanus icaco</i>		cocoplum
5888	FACW		
5889	<i>Cladium jamaicense</i>		sawgrass
5890	OBL		
5891	<i>Dichanthelium</i> sp.		grass
5892	<i>Ficus aurea</i>		strangler fig
5893	FAC		
5894	<i>Magnolia virginiana</i>		magnolia
5895	<i>Myrica cerifera</i>		wax myrtle
5896	FAC		
5897	<i>Persea borbonia</i>		red bay
5898	<i>Phlebodium aureum</i>		golden serpent fern
5899	<i>Psychotria nervosa</i>		wild coffee
5900	FAC		
5901	<i>Psychotria sulzneri</i>		wild coffee
5902	FAC		
5903	<i>Quercus laurifolia</i>		laurel oak
5904	FACW		
5905	<i>Rapanea punctata</i>		myrsine
5906	FAC		
5907	<i>Sabal palmetto</i>		sabal palm
5908	FAC		
5909	<i>Smilax auriculata</i>		greenbriar
5910	<i>Taxodium distichum</i>		bald cypress
5911	OBL		
5912	<i>Tillandsia balbisiana</i>		air plant
5913	<i>Tillandsia fasciculata</i>		air plant
5914	<i>Toxicodendron radicans</i>		poison ivy
5915	<i>Urena lobata</i>		Caesar weed
5916			
5917			
5918	<u>Other Representative Plants Near, But not Within Quadrat</u>		
5919			
5920	<i>Berchemia scandens</i>		rattan vine
5921	<i>Bumelia celastrina</i>		buckthorn
5922	FAC		
5923	<i>Tillandsia utriculata</i>		air plant
5924	<i>Vittaria lineata</i>		shoestring fern

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Cover measures: meters of transect line intercepts of vascular plant species within 10m X 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four randomly selected 10m transects within the sample quadrat. The category Epiphytes includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but contribute to the tree or shrub canopy layers.

<u>Species</u>	<u>Meters intercepted</u>	
<u>Tree Canopy</u>	Exotics	
<i>Chrysobalanus icaco</i>	0.33	
<i>Magnolia virginiana</i>	2.44	
<i>Myrica cerifera</i>	0.53	
<i>Persea borbonia</i>	3.52	
<i>Quercus laurifolia</i>	1.73	
<i>Rapanea punctata</i>	0.21	
<i>Sabal palmetto</i>		3.67
<i>Taxodium distichum</i>	<u>0.55</u>	
	13.56	
<u>Shrubs</u>		
<i>Baccharis halimifolia</i>	0.02	
<i>Chrysobalanus icaco</i>	0.42	
<i>Magnolia virginiana</i>	0.02	
<i>Myrica cerifera</i>	0.84	
<i>Persea borbonia</i>	0.19	
<i>Psychotria nervosa</i>	0.07	
<i>Psychotria sulzneri</i>	0.04	
<i>Rapanea punctata</i>	0.59	
<i>Sabal palmetto</i>		<u>1.71</u>
		3.90
<u>Epiphytes</u>		
<i>Smilax auriculata</i>	0.04	
<i>Tillandsia balbisiana</i>	0.03	
<i>Toxicodendron radicans</i>	<u>0.34</u>	
		0.41
<u>Ground Cover</u>		
<i>Annona glabra</i>		0.03
<i>Blechnum serrulatum</i>	4.37	
<i>Cladium jamaicense</i>	0.05	
<i>Dichanthelium</i> sp.	0.03	
<i>Persea borbonia</i>	0.18	
<i>Psychotria sulzneri</i>	0.03	
<i>Quercus laurifolia</i>	0.06	
<i>Rapanea punctata</i>	0.09	
<i>Sabal palmetto</i>		0.38
<i>Toxicodendron radicans</i>	<u>0.14</u>	
		5.36

5973 Site 33c.
5974 Twp. S, Rng. E, Sec. .
5975
5976 Date of cover measures:
5977
5978 Investigators: J. N. Burch, G. Hendricks, H. Yamataki
5979
5980 Community type:
5981 *The tree canopy
5982 The shrub layer
5983 Ground cover
5984 Soils
5985 Fire
5986 Exotic species
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5989 Indicators of inundation: Within the sample quadrat area were ***** species of vascular
5990 plants that are listed as Obligate wetland inhabitants, and ***** species that are listed as
5991 Facultative wetland inhabitants by the Florida Department of Environmental Protection
5992 (Hydric Soil Field Indicators, lists for Chapter 62340).
5993
5994 Community type as interpreted by Leighty et al.(1954):
5995
5996 Soil type (Leighty et al., 1954):
5997
5998 Piezometer GPS location:
5999
6000 GPS Coordinates
6001
6002 North East
6003 Coordinate Coordinate
6004
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6006
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6008 Quadrat location: The piezometer is established as the ***** corner of the sample
6009 quadrat area.
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6011
6012 Vascular Plant Species Encountered (Total =)
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6016 Other Representative Plants Near, But not Within Quadrat
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6020 Cover measures: meters of transect line intercepts of vascular plant species within 10m X
6021 10m quadrats. Measures are mean measures(meters) of vascular plants intercepting four
6022 randomly selected 10m transects within the sample quadrat.
6023
6024 Species Meters intercepted
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6026 Tree Canopy Exotics*

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Shrubs

Ground Cover

EXHIBIT C: SURVEY SITE DESCRIPTIONS 1998-2000

Site 1.

Date of Cover Measures: 24 August, 1999

Investigators: Burch, Hendricks

Community Type: Mesic pine flatwoods. The area appears to have burned within the past 12 months.

Indicators of Inundation: Within the sample quadrat area, three vascular plant species noted were Facultative wetland indicator species, and three vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Six vascular plant species noted were Facultative wetland indicator species, and one vascular plant species noted was an Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Vascular Plant Species Encountered (Total = 30)

Plants listed in the State of Florida Hydric Soil Field Indicators and National List of Plant Species that Occur in Wetlands are indicated, respectively, beneath each species as appropriate (see below, Vascular Plant Species Wetland Community Indicators).

<i>Ambrosia artemesiifolia</i>	ragweed
<i>Andropogon glomeratus</i> FACW, FACW+	bushybeard bluestem
<i>Andropogon virginicus</i> FAC, FAC-	bluestem
<i>Aristida stricta</i>	wiregrass
<i>Cassytha filiformis</i> -- , FAC-	love vine
<i>Dichanthelium</i> sp.	grass
<i>Euphorbia polyphylla</i> FACW, --	spurge
<i>Gratiola hispida</i> FAC, FAC	--
<i>Ilex glabra</i> --, FACW	gallberry
<i>Lyonia fruticosa</i> --, FAC	staggerbush
* <i>Melochia corchorifolia</i> FAC, FAC	chocolate weed
<i>Myrica cerifera</i> FAC, FAC+	wax myrtle

6085	<i>Panicum tenerum</i>	bluejoint panicum
6086	OBL, FACW	
6087	<i>Paspalum ciliatifolium</i>	grass
6088	<i>Paspalum monostachyum</i>	gulfcoast paspalum
6089	OBL, FACW	
6090	<i>Piloblephis rigida</i>	pennyroyal
6091	<i>Pinus elliottii</i>	slash pine
6092	FACW, FACW	
6093	<i>Pityopsis graminifolia</i>	golden aster
6094	<i>Pterocaulon virgatum</i>	rabbit tobacco
6095	<i>Rhus copallina</i>	sumac
6096	<i>Rudbeckia hirta</i>	black-eyed Susan
6097	<i>Ruellia caroliniensis</i>	wild petunia
6098	FAC, --	
6099	<i>Sabal palmetto</i>	sabal palm
6100	FAC, FAC	
6101	<i>Scleria</i> sp.	sedge
6102	<i>Serenoa repens</i>	saw palmetto
6103	<i>Smilax laurifolia</i>	greenbriar
6104	FACW+	
6105	<i>Stenandrium dulce</i>	sweet shaggytuft
6106	--, OBL	
6107	<i>Tephrosia rugelii</i>	--
6108	<i>Toxicodendron radicans</i>	poison ivy
6109	--, FAC	
6110	<i>Vaccinium myrsinites</i>	blue berry

Other Representative Plants Near, but Not Within Quadrat

6113		
6114	<i>Carphephorus corymbosus</i>	chaffhead
6115	<i>Elephantopus alatus</i>	elephant foot
6116	<i>Liatris spicata</i> (?)	gayfeather
6117	<i>Ludwigia microcarpa</i>	--
6118	OBL, OBL	
6119	<i>Pteridium aquilinum</i>	bracken fern
6120	<i>Solidago</i> sp.	goldenrod
6121	<i>Teucrium canadense</i>	germander
6122	FACW, FACW-	

6124 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
6125 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
6126 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
6127 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
6128 contribute to the tree or shrub canopy layers.

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6131 Species: Meters Intercepted

6132

6133 Tree Canopy Exotics

6134 *Pinus elliottii* 2.94

6135 *Lyonia fruticosa* 0.35

6136		3.29	
6137			
6138	<u>Shrubs</u>		
6139	<i>Ilex glabra</i>	0.27	
6140	<i>Myrica cerifera</i>	0.50	
6141	<i>Sabal palmetto</i>	0.81	
6142	<i>Serenoa repens</i>	<u>7.37</u>	
6143		8.95	
6144	<u>Epiphytes</u>		
6145	<i>Smilax laurifolia</i>	<u>0.06</u>	
6146		0.06	
6147	<u>Ground Cover</u>		
6148	<i>Andropogon glomeratus</i>	0.28	
6149	<i>Andropogon virginicus</i>	1.01	
6150	<i>Aristida stricta</i>	0.20	
6151	<i>Cassytha filiformis</i>	0.01	
6152	<i>Dichanthelium</i> sp.	0.13	
6153	<i>Dichanthelium</i> sp.	0.01	
6154	<i>Ilex glabra</i>	0.02	
6155	<i>Lyonia fruticosa</i>	0.01	
6156	* <i>Melochia corchorifolia</i>	0.01	0.01
6157	<i>Myrica cerifera</i>	0.07	
6158	<i>Panicum tenerum</i>	0.01	
6159	<i>Paspalum monostachyum</i>	0.01	
6160	<i>Pityopsis graminifolia</i>	0.03	
6161	<i>Pterocaulon virgatum</i>	0.03	
6162	<i>Rhus copallina</i>	0.08	
6163	<i>Ruellia caroliniensis</i>	0.02	
6164	<i>Scleria</i> sp.	0.15	
6165	<i>Smilax laurifolia</i>	0.04	
6166	<i>Tephrosia rugelii</i>	0.39	
6167	<i>Toxicodendron radicans</i>	0.15	
6168	<i>Vaccinium myrsinites</i>	<u>0.06</u>	
6169		2.72	<u>0.01</u>

6170

6171 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate

6172 wetland communities. Listing is from State of Florida Wetland Plant List (State of

6173 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and

6174 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;

6175 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

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6182 1997

6183	<u>Number of</u>		<u>Percent Cover</u>		
6184	<u>Species</u>	<u>Trees</u>	<u>Shrubs</u>	<u>Epiphytes</u>	<u>Ground Cover</u>

6185		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6186	FAC	4(19.0)	5(23.8)		13.4	4.4	7.2			52.9	54.8
6187	FW	2(9.5)	5(23.8)	86.6	86.6						22.1
6188	OBL	3(14.3)	1(4.8)							8.7	
6189											
6190											
6191	1999										
6192		<u>Number of</u>		<u>Percent Cover</u>							
6193		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
6194		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6195	FAC	6(20.0)	7(23.3)		10.6	14.6	14.6			40.8	46.0
6196	FW	3(10.0)	6(20.0)	89.4	89.4		3.0		100	10.3	12.5
6197	OBL	3(10.0)	1(3.0)							0.7	
6198											
6199											



Site 1, north of piezometer.



Site 1, east of piezometer.



Site 1, south of piezometer.



Site 1, west of piezometer.

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Site 2.

Date of Cover Measures: 23 August, 1999

Investigators: Burch, Hendricks

Community Type: Cypress prairie.

Indicators of Inundation: Within the sample quadrat area, four vascular plant species noted were Facultative wetland indicator species, and two vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Four vascular plant species noted were Facultative wetland indicator species, and two vascular plant species noted were Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Vascular Plant Species Encountered (Total = 25)

Plants listed in the State of Florida Hydric Soil Field Indicators and National List of Plant Species that Occur in Wetlands are indicated, respectively, beneath each species as appropriate (see below, Vascular Plant Species Wetland Community Indicators).

<i>Amphicarpum muhlenbergianum</i>	blue maidencane
FACW, FACW	
<i>Andropogon virginicus</i>	bluestem
FAC, FAC-	
* <i>Borreria verticillata</i>	--
<i>Cladium jamaicense</i>	saw grass
OBL, OBL	
<i>Dichanthelium</i> sp.	grass
<i>Eupatorium capillifolium</i>	dog fennel
FAC, --	
<i>Euthamia minor</i>	--
FAC, FAC	
<i>Heliotropium polyphyllum</i>	pineland heliotrope
FAC, FAC	
* <i>Melochia corchorifolia</i>	chocolate weed
FAC, FAC	
<i>Myrica cerifera</i>	wax myrtle
FAC, FAC+	
<i>Panicum ciliatum</i>	grass
FAC, --	
<i>Parthenocissus quinquefolia</i>	Virginia creeper
--, FAC	
<i>Pinus elliotii</i>	slash pine
FACW, FACW	
<i>Pluchea odorata</i>	fleabane
FACW, FACW	

6257	<i>Polypremum procumbens</i>	rustweed
6258	<i>Rhexia mariana</i>	meadow beauty
6259	FACW, FACW	
6260	<i>Rubus trivialis</i>	dewberry
6261	FAC, FAC	
6262	<i>Sabal palmetto</i>	sabal palm
6263	FAC, FAC	
6264	* <i>Schinus terebinthifolius</i>	Brazilian pepper
6265	FAC, FAC	
6266	<i>Scoparia dulcis</i>	sweet broom
6267	FAC, FAC	
6268	<i>Setaria geniculata</i>	knotroot bristlegrass
6269	FAC, FAC	
6270	<i>Smilax auriculata</i>	greenbriar
6271	<i>Taxodium distichum</i>	bald cypress
6272	OBL, OBL	
6273	<i>Urena lobata</i>	Caesar weed
6274	<i>Vitis munsoniana</i>	muscadine grape
6275	--, FAC	

6276

Other Representative Plants Near, but Not Within Quadrat

6277	<i>Axonopus affinis</i>	carpet grass
6278	FAC, FACW-	
6279	<i>Eragrostis elliottii</i>	grass
6280	FAC, FACW	
6281	<i>Gratiola hispida</i>	--
6282	FAC, FAC	

6283

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6285 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
6286 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
6287 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
6288 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
6289 contribute to the tree or shrub canopy layers.

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6292	<u>Species:</u>	<u>Meters Intercepted</u>
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6294	<u>Tree Canopy</u>	<u>Exotics</u>
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6295	<i>Pinus elliottii</i>	4.28
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6296	<i>Taxodium distichum</i>	<u>0.10</u>
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6297		4.38
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6298	<u>Shrubs</u>	
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6299	<i>Sabal palmetto</i>	<u>0.05</u>
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6300		0.05
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6301	<u>Epiphytes</u>	
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6304	<u>Ground Cover</u>	
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6305	<i>Amphicarpum muhlenbergianum</i>	5.33
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6306	<i>Borreria verticillata</i>	1.16	1.16
6307	<i>Cladium jamaicense</i>	0.05	
6308	<i>Euthamia minor</i>	0.18	
6309	<i>Melochia corchorifolia</i>	0.06	0.06
6310	<i>Panicum ciliatum</i>	0.10	
6311	<i>Parthenocissus quinquefolia</i>	0.01	
6312	<i>Pluchea odorata</i>	0.01	
6313	<i>Rhexia mariana</i>	0.01	
6314	<i>Rubus trivialis</i>	1.41	
6315	<i>Sabal palmetto</i>	0.40	
6316	<i>Scoparia dulcis</i>	0.03	
6317	<i>Setaria geniculata</i>	0.08	
6318	<i>Smilax auriculata</i>	0.02	
6319	<i>Vitis munsoniana</i>	0.10	
6320		9.00	1.22

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6322 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 6323 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 6324 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 6325 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 6326 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

6327

6328 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6330											
6331											
6332	FAC	7(35.0)	9(45.0)			52.3	52.3			28.5	31.1
6333	FW	3(15.0)	4(20.0)	88.0	88.0	17.4	17.4			60.2	60.2
6334	OBL	2(10.0)	2(10.0)	12.0	12.0	30.3	30.3			2.3	6.9

6335

6336

6337 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6338											
6339											
6340											
6341	FAC	12(48.0)	11(44.0)			100	100			25.1	25.2
6342	FW	4(16.0)	4(16.0)	97.7	97.7					59.4	59.4
6343	OBL	2(8.0)	2(8.0)	2.3	2.3					0.6	0.6

6344

6345

6346



Site 2, north of piezometer.



Site 2, east of piezometer.



Site 2, south of piezometer.



Site 2, west of piezometer.

Site 3.

Date of Cover Measures: 27 March, 1999.

Investigators: Burch

Community Type: Mesic pine flatwoods.

Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted were Facultative wetland indicator species, and five vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Ten vascular plant species noted were Facultative wetland indicator species, and three vascular plant species noted were Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Vascular Plant Species Encountered (Total = 22)

Plants listed in the State of Florida Hydric Soil Field Indicators and National List of Plant Species that Occur in Wetlands are indicated, respectively, beneath each species as appropriate (see below, Vascular Plant Species Wetland Community Indicators).

<i>Andropogon virginicus</i>	bluestem
FAC, FAC-	
<i>Chaptalia tomentosa</i>	pineland daisy
FACW, FACW	
<i>Dichanthelium</i> sp.	grass
<i>Euphorbia polyphylla</i>	spurge
FACW, --	
<i>Parthenocissus quinquefolia</i>	Virginia creeper
--, FAC	
<i>Paspalum monostachyum</i>	gulfcoast paspalum
OBL, FACW	
<i>Phlebodium aureum</i>	golden serpent fern
<i>Pinus elliotii</i>	slash pine
FACW, FACW	
<i>Sabal palmetto</i>	sabal palm
FAC, FAC	
<i>Serenoa repens</i>	saw palmetto
<i>Smilax auriculata</i>	greenbriar
<i>Toxicodendron radicans</i>	poison ivy
--, FAC	
<i>Vitis munsoniana</i>	muscadine grape
--, FAC	
<i>Waltheria indica</i>	--

Other Representative Plants Near, but Not Within Quadrat

6405	<i>*Borreria verticillata</i>	--
6406	<i>Cirsium horridulum</i>	thistle
6407	-- , FAC+	
6408	<i>Gaura angustifolia</i>	beeblosom
6409	<i>Hyptis alata</i>	bush mint
6410	FACW, OBL	
6411	<i>Myrica cerifera</i>	wax myrtle
6412	FAC, FAC+	
6413	<i>Pityopsis graminifolia</i>	golden aster
6414	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
6415	FAC, FACW-	

6416

6417 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m

6418 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting

6419 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true

6420 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but

6421 contribute to the tree or shrub canopy layers.

6422		
6423		
6424	<u>Species:</u>	<u>Meters Intercepted</u>
6425		
6426	<u>Tree Canopy</u>	<u>Exotics</u>
6427	<i>Pinus elliottii</i>	6.13
6428	<i>Sabal palmetto</i>	3.06
6429		9.19
6430	<u>Shrubs</u>	
6431	<i>Sabal palmetto</i>	0.41
6432	<i>Serenoa repens</i>	7.61
6433		8.02
6434	<u>Epiphytes</u>	
6435	<i>Phlebodium aureum</i>	0.06
6436	<i>Smilax auriculata</i>	0.03
6437		0.09
6438	<u>Ground Cover</u>	
6439	<i>Andropogon virginicus</i>	0.07
6440	<i>Chaptalia tomentosa</i>	0.05
6441	<i>Dichanthelium</i> sp.	0.28
6442	<i>Euphorbia polyphylla</i>	0.02
6443	<i>Parthenocissus quinquefolia</i>	0.02
6444	<i>Paspalum monostachyum</i>	0.25
6445	<i>Smilax auriculata</i>	0.05
6446	<i>Toxicodendron radicans</i>	0.06
6447	<i>Vitis munsoniana</i>	0.02
6448	<i>Waltheria indica</i>	0.06
6449		0.88

6450

6451 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate

6452 wetland communities. Listing is from State of Florida Wetland Plant List (State of

6453 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and

6454 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 6455 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

6456
 6457 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6461	FAC	2(13.3)	4(26.7)	7.2	7.2	57.8	57.8		4.0	4.0
6462	FW	6(40.0)	4(26.7)	92.8	92.8				20.0	24.0
6463	OBL	1(6.7)							16.0	

6465
 6466 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6470	FAC	2(14.3)	4(28.6)	33.4	33.4	51.1	51.1		8.0	11.4
6471	FW	3(22.4)	3(21.4)	66.6	66.6				8.0	34.1
6472	OBL	1(7.1)							28.4	

6473
 6474



6475
 6476 Site 3, north of piezometer.



6477
 6478 Site 3, east of piezometer.



6479
 6480 Site 3, south of piezometer.



6481
 6482 Site 3, west of piezometer.
 6483

6483 **Site 4.**
6484
6485 Date of Cover Measures: 30 May, 1999
6486
6487 Investigators: Burch
6488
6489 Community Type: Palm and oak hammock.
6490
6491 Indicators of Inundation: Within the sample quadrat area, two vascular plant species
6492 noted were Facultative wetland indicator species on the State of Florida Wetland Plant
6493 List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al.
6494 1998). Four vascular plant species noted were Facultative wetland indicator species on
6495 the National List of Plant Species that Occur in Wetlands (Reed 1998).
6496
6497 Vascular Plant Species Encountered (Total = 22)
6498 Plants listed in the State of Florida Hydric Soil Field Indicators and
6499 National List of Plant Species that Occur in Wetlands are indicated,
6500 respectively, beneath each species as appropriate (see below, Vascular
6501 Plant Species Wetland Community Indicators).
6502
6503 *Apios americana* groundnut
6504 --, FACW
6505 *Blechnum serrulatum* blechnum fern
6506 FACW, FACW+
6507 *Callicarpa americana* beauty berry
6508 *Campyloneurum phyllitidis* strap fern
6509 *Cynanchum scoparium* --
6510 *Ipomoea indica* morning glory
6511 --, FAC
6512 *Lantana camara* lantana
6513 *Parthenocissus quinquefolia* Virginia creeper
6514 --, FAC
6515 *Persea borbonia* red bay
6516 --, FACW
6517 *Phlebodium aureum* golden serpent fern
6518 *Psychotria nervosa* wild coffee
6519 FAC, --
6520 *Psychotria sulzneri* wild coffee
6521 FAC, --
6522 *Pteridium aquilinum* bracken fern
6523 *Quercus laurifolia* laurel oak
6524 FACW, FACW
6525 *Rapanea punctata* myrsine
6526 FAC, FAC
6527 *Sabal palmetto* sabal palm
6528 FAC, FAC
6529 *Schinus terebinthifolius* Brazilian pepper
6530 FAC, FAC
6531 *Smilax auriculata* greenbriar
6532 *Tillandsia usneoides* air plant
6533 *Toxicodendron radicans* poison ivy

6534	--, FAC	
6535	<i>Vitis munsoniana</i>	muscadine grape
6536	--, FAC	
6537	<i>Vittaria lineata</i>	shoestring fern
6538	--, FAC	

6539
6540

6541 Other Representative Plants Near, but Not Within Quadrat

6542		
6543	<i>Itea virginica</i>	Virginia willow
6544	OBL, FACW+	
6545	<i>Pinus elliotii</i>	slash pine
6546	FACW, FACW	
6547	<i>Tillandsia setacea</i>	air plant
6548	<i>Urena lobata</i>	Caesar weed

6549

6550 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
6551 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
6552 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
6553 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
6554 contribute to the tree or shrub canopy layers.

6555

6556

6557 Species: Meters Intercepted

6558

6559 Tree Canopy Exotics

6560 *Quercus laurifolia* 10.00

6561 *Sabal palmetto* 3.98

6562 13.98

6563 Shrubs

6564 *Lantana camara* 0.29 0.29

6565 *Persea borbonia* 0.12

6566 *Psychotria sulzneri* 0.01

6567 *Rapanea punctata* 0.11

6568 *Sabal palmetto* 1.51

6569 2.04 0.29

6570 Epiphytes

6571 *Parthenocissus quinquefolia* 0.18

6572 *Phlebodium aureum* 0.18

6573 *Toxicodendron radicans* 0.42

6574 *Vitis munsoniana* 0.01

6575 0.79

6576 Ground Cover

6577 *Apios americana* 0.03

6578 *Blechnum serrulatum* 5.65

6579 *Cynanchum scoparium* 0.10

6580 *Ipomoea indica* 0.01

6581 *Parthenocissus quinquefolia* 0.01

6582 *Phlebodium aureum* 0.06

6583 *Psychotria nervosa* 0.08

6584 *Pteridium aquilinum* 0.10

6585	<i>Rapanea punctata</i>	0.09	
6586	<i>Schinus terebinthifolius</i>	0.01	0.01
6587	<i>Smilax auriculata</i>	0.02	
6588	<i>Toxicodendron radicans</i>	0.27	
6589	<i>Vitis munsoniana</i>	0.03	
6590		6.46	0.01

6591
6592 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
6593 wetland communities. Listing is from State of Florida Wetland Plant List (State of
6594 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
6595 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
6596 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

6597
6598 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6601											
6602	FAC	4(17.4)	6(26.1)	45.6	45.6	96.0	96.0		9.9	8.8	14.7
6603	FW	2(8.7)	5(21.7)	54.4	54.4		2.5		50.0	77.3	78.1
6604	OBL	1(4.3)								0.8	

6605
6606
6607 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6609											
6610											
6611	FAC	5(22.7)	8(36.4)	28.5	28.5	79.5	79.4		76.0	0.3	4.7
6612	FW	2(9.1)	4(18.2)	71.5	71.5		5.9			87.5	87.6
6613	OBL										

6614
6615
6616



6617
6618 Site 4, north of piezometer.



6619 Site 4, east of piezometer.

6620



Site 4, south of piezometer.



Site 4, west of piezometer.

6621
6622
6623
6624
6625

6625
6626 **Site 5.**

6627
6628 Date of Cover Measures: 25 August, 1999.

6629
6630 Investigators: Burch, Hendricks

6631
6632 Community Type: Sandy prairie/ disturbed cypress.

6633
6634 Indicators of Inundation: Within the sample quadrat area, 10 vascular plant species noted
6635 were Facultative wetland indicator species, and 10 vascular plant species noted were
6636 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
6637 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine
6638 vascular plant species noted were Facultative wetland indicator species, and 10 vascular
6639 plant species noted were Obligate wetland indicator species on the National List of Plant
6640 Species that Occur in Wetlands (Reed 1998).

6641
6642 Vascular Plant Species Encountered (Total = 39)

6643 Plants listed in the State of Florida Hydric Soil Field Indicators and
6644 National List of Plant Species that Occur in Wetlands are indicated,
6645 respectively, beneath each species as appropriate (see below, Vascular
6646 Plant Species Wetland Community Indicators).

6648	<i>Andropogon virginicus</i>	bluestem
6649	FAC, FAC-	
6650	<i>Baccharis halimifolia</i>	salt bush
6651	FAC, FAC	
6652	<i>Blechnum serrulatum</i>	blechnum fern
6653	FACW, FACW+	
6654	<i>Cephalanthus occidentalis</i>	button bush
6655	OBL, OBL	
6656	<i>Cladium jamaicense</i>	saw grass
6657	OBL, OBL	
6658	<i>Conoclinium coelestinum</i>	mist flower
6659	FAC, FAC	
6660	<i>Conyza canadensis</i>	dwarf horseweed
6661	<i>Cyperus haspan</i>	sedge
6662	OBL, OBL	
6663	<i>Dichanthelium dichotomum</i>	grass
6664	FACW, FAC	
6665	<i>Dichanthelium</i> sp.	grass
6666	<i>Erianthus giganteus</i>	plumegrass
6667	OBL, FACW	
6668	<i>Eryngium balduinii</i>	snakeroot
6669	FAC, FACW+	
6670	<i>Eupatorium capillifolium</i>	dog fennel
6671	FAC, --	
6672	<i>Eupatorium mikanioides</i>	semaphore eupatorium
6673	FACW, FACW	
6674	<i>Eustachys glauca</i>	grass

6675	FACW, FACW	
6676	<i>Flaveria linearis</i>	yellowtop
6677	FACW, FACW	
6678	<i>Fuirena scirpoidea</i>	umbrella grass
6679	OBL, OBL	
6680	<i>Hypericum hypericoides</i>	St. Andrew's cross
6681	FAC, FAC	
6682	<i>Iresine diffusa</i>	blood leaf
6683	* <i>Lippia nodiflora</i>	carpetweed
6684	<i>Lythrum alatum</i>	loosestrife
6685	OBL, FACW+	
6686	<i>Panicum hemitomon</i>	maiden cane
6687	OBL, OBL	
6688	<i>Parthenocissus quinquefolia</i>	Virginia creeper
6689	--, FAC	
6690	<i>Pluchea odorata</i>	fleabane
6691	FACW, FACW	
6692	<i>Polygala grandiflora</i>	candyroot
6693	FACW, --	
6694	* <i>Rhynchelytrum repens</i>	Natal grass
6695	<i>Rhynchospora inundata</i>	horned beakrush
6696	OBL, OBL	
6697	<i>Rubus trivialis</i>	dewberry
6698	FAC, FAC	
6699	<i>Sabal palmetto</i>	sabal palm
6700	FAC, FAC	
6701	<i>Sacciolepis striata</i>	cupscale
6702	OBL, OBL	
6703	<i>Salix caroliniana</i>	willow
6704	OBL, OBL	
6705	* <i>Schinus terebinthifolius</i>	Brazilian pepper
6706	FAC, FAC	
6707	<i>Scleria</i> sp.	sedge
6708	<i>Scoparia dulcis</i>	sweet broom
6709	FAC, FAC	
6710	<i>Setaria geniculata</i>	knotroot bristlegrass
6711	FAC, FAC	
6712	<i>Solidago fistulosa</i>	marsh goldenrod
6713	FACW, FAC	
6714	<i>Stenandrium dulce</i>	sweet shaggytuft
6715	--, OBL	
6716	<i>Teucrium canadense</i>	germander
6717	FACW, FACW-	
6718	<i>Woodwardia virginica</i>	chain fern
6719	FACW, OBL	
6720		
6721	<u>Other Representative Plants Near, but Not Within Quadrat</u>	
6722		
6723	<i>Bidens alba</i>	beggar ticks
6724	FAC, FACW-	
6725	<i>Bumelia celastrina</i>	buckthorn
6726	FAC, --	

6727 *Solidago stricta* goldenrod
6728 FACW, OBL
6729 *Taxodium distichum* bald cypress
6730 OBL, OBL
6731
6732 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
6733 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
6734 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
6735 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
6736 contribute to the tree or shrub canopy layers.
6737
6738

6739 Species: Meters Intercepted

6740

6741 Tree Canopy

Exotics

6742

6743 Shrubs

6744 *Cephalanthus occidentalis* 0.90

6745 *Hypericum hypericoides* 3.34

6746 *Sabal palmetto* 0.04

6747 4.28

6748 Epiphytes

6749

6750 Ground Cover

6751 *Andropogon virginicus* 0.40

6752 *Blechnum serrulatum* 0.03

6753 *Cephalanthus occidentalis* 0.13

6754 *Cladium jamaicense* 0.64

6755 *Conoclinium coelestinum* 0.22

6756 *Cyperus haspan* 0.21

6757 *Dichanthelium dichotomum* 0.03

6758 *Dichanthelium* sp. 0.02

6759 *Erianthus giganteus* 0.17

6760 *Eupatorium capillifolium* 0.10

6761 *Eupatorium mikanioides* 0.06

6762 *Eustachys glauca* 0.06

6763 *Flaveria linearis* 0.15

6764 *Lippia nodiflora* 0.12 0.12

6765 *Lythrum alatum* 0.16

6766 *Panicum hemitomon* 0.08

6767 *Parthenocissus quinquefolia* 0.04

6768 *Pluchea odorata* 0.02

6769 *Rhynchelytrum repens* 0.24 0.24

6770 *Rubus trivialis* 0.01

6771 *Sacciolepis striata* 0.11

6772 *Scoparia dulcis* 0.05

6773 *Setaria geniculata* 0.03

6774 *Solidago fistulosa* 3.12

6775 *Teucrium canadense* 0.35

6776 *Woodwardia virginica* 0.04 _____

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6.59 0.36

Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate wetland communities. Listing is from State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative; FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
FAC	3(15.0)	2(10.0)							11.3	5.6
FW	7(35.0)	9(45.0)							12.1	19.7
OBL	5(25.0)	4(20.0)			100	100			66.8	62.7

1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
FAC	11(28.2)	11(28.2)			79.0	79.0			12.3	53.1
FW	10(25.6)	9(23.1)							58.6	15.2
OBL	10(25.6)	10(25.6)			21.0	21.0			22.8	18.4



Site 5, north of piezometer.



Site 5, east of piezometer.



6803
6804
6805

6806

6807 Site 5, south of piezometer.
6808
6809
6810

Site 5, west of piezometer.

Site 6.

Date of Cover Measures: 25 August, 1999.

Investigators: Burch, Hendricks.

Community Type: Hydric pine and cypress flatwoods.

Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted were Facultative wetland indicator species, and 13 vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine vascular plant species noted were Facultative wetland indicator species, and 13 vascular plant species noted were Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Vascular Plant Species Encountered (Total = 31)

Plants listed in the State of Florida Hydric Soil Field Indicators and National List of Plant Species that Occur in Wetlands are indicated, respectively, beneath each species as appropriate (see below, Vascular Plant Species Wetland Community Indicators).

<i>Amphicarpum muhlenbergianum</i>	blue maidencane
FACW, FACW	
<i>Bacopa caroliniana</i>	hyssop
OBL, OBL	
<i>Bumelia celastrina</i>	buckthorn
FAC, --	
<i>Cassytha filiformis</i>	love vine
-- , FAC-	
<i>Cladium jamaicense</i>	saw grass
OBL, OBL	
<i>Cyperus haspan</i>	sedge
OBL, OBL	
<i>Dichanthelium</i> sp.	grass
<i>Dichondra carolinensis</i>	pony foot
FAC, FACW-	
<i>Diodia virginiana</i>	button weed
FACW, FACW	
<i>Eryngium balduinii</i>	snakeroot
FAC, FACW+	
<i>Eupatorium capillifolium</i>	dog fennel
FAC, --	
<i>Euthamia minor</i>	--
FAC, FAC	
<i>Flaveria linearis</i>	yellowtop
FACW, FACW	
<i>Hydrolea corymbosa</i>	skyflower
OBL, OBL	

6860	<i>Hyptis alata</i>	bush mint
6861	FACW, OBL	
6862	<i>Ilex cassine</i>	dahoon holly
6863	OBL, FACW	
6864	<i>Ipomoea sagittata</i>	morning glory
6865	--, FACW	
6866	<i>Juncus megacephalus</i>	rush
6867	OBL, OBL	
6868	<i>Ludwigia octovalvis</i>	water primrose
6869	OBL, OBL	
6870	<i>Panicum hemitomon</i>	maiden cane
6871	OBL, OBL	
6872	<i>Pinus elliottii</i>	slash pine
6873	FACW, FACW	
6874	<i>Pluchea odorata</i>	fleabane
6875	FACW, FACW	
6876	<i>Proserpinaca pectinata</i>	mermaid weed
6877	OBL, OBL	
6878	<i>Sagittaria lancifolia</i>	duck potato
6879	OBL, OBL	
6880	<i>Sagittaria graminea</i>	duck potato
6881	OBL, OBL	
6882	* <i>Schinus terebinthifolius</i>	Brazilian pepper
6883	FAC, FAC	
6884	<i>Scleria</i> sp 1.	sedge
6885	<i>Scleria</i> sp 2.	sedge
6886	<i>Stillingia aquatica</i>	corkwood
6887	OBL, OBL	
6888	<i>Taxodium distichum</i>	bald cypress
6889	OBL, OBL	
6890	<i>Tillandsia recurvata</i>	ball moss

Other Representative Plants Near, but Not Within Quadrat

6893	<i>Baccharis halimifolia</i>	salt bush
6894	FAC, FAC	
6895	<i>Cirsium horridulum</i>	thistle
6896	-- , FAC+	
6897	<i>Rhynchospora intermedia</i>	beakrush
6898	FACW, FACW	
6899	<i>Rhynchospora inundata</i>	horned beakrush
6900	OBL, OBL	
6901	<i>Sabal palmetto</i>	sabal palm
6902	FAC, FAC	
6903	* <i>Syzegium</i> sp.	--
6904	<i>Toxicodendron radicans</i>	poison ivy
6905	--, FAC	
6906	* <i>Urena lobata</i>	Caesar weed

6908 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
6909 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
6910 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true

6911 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 6912 contribute to the tree or shrub canopy layers.

6913
 6914
 6915 Species: Meters Intercepted

6916
 6917 Tree Canopy Exotics
 6918 *Ilex cassine* 0.35
 6919 *Pinus elliottii* 0.52
 6920 *Taxodium distichum* 7.41
 6921 8.28

6922 Shrubs
 6923 *Pinus elliottii* 0.05
 6924 *Stillingia aquatica* 0.15
 6925 0.20

6926 Epiphytes

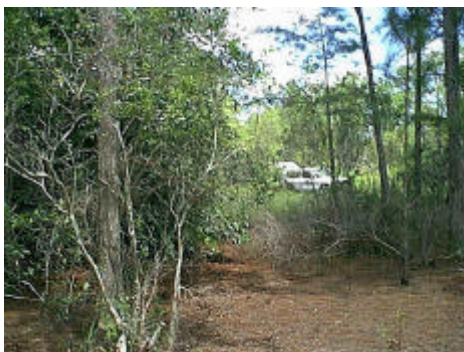
6927
 6928 Ground Cover
 6929 *Amphicarpum muhlenbergianum* 0.21
 6930 *Cladium jamaicense* 0.19
 6931 *Dichanthelium* sp. 0.01
 6932 *Dichondra carolinensis* 0.06
 6933 *Eryngium balduinii* 0.01
 6934 *Eupatorium capillifolium* 0.16
 6935 *Hydrolea corymbosa* 0.73
 6936 *Hyptis alata* 0.01
 6937 *Ipomoea sagittata* 0.02
 6938 *Juncus megacephalus* 0.05
 6939 *Ludwigia octovalvis* 0.11
 6940 *Panicum hemitomon* 0.14
 6941 *Pinus elliottii* 0.06
 6942 *Pluchea odorata* 0.02
 6943 *Sagittaria lancifolia* 0.01
 6944 *Sagittaria graminea* 0.01
 6945 *Scleria* sp 1. 0.01
 6946 unk. herb 0.01
 6947 1.82

6948
 6949 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 6950 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 6951 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 6952 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 6953 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

6954
 6955 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6958	FAC	6(24.0)	5(20.0)			98.2	98.2		7.9	0.8

6960	FW	4(16.0)	11(44.0)	7.8	7.8					75.9	81.0
6961	OBL	7(28.0)	6(24.0)	92.2	92.2	0.8	0.8			14.7	10.2
6962											
6963											
6964	1999										
6965		<u>Number of</u>		<u>Percent Cover</u>							
6966		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
6967		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
6968	FAC	6(19.4)	2(6.5)							12.6	
6969	FW	6(19.4)	9(29.0)	6.3	10.5	25.0	25.0			16.5	17.6
6970	OBL	13(41.9)	13(41.9)	93.7	89.5	75.0	75.0			68.1	68.7
6971											



Site 6, north of piezometer.



Site 6, east of piezometer.



Site 6, south of piezometer.



Site 6, west of piezometer.

6980
6981 **Site 7.**

6982
6983 Date of Cover Measures: 27 March, 1999

6984
6985 Investigators: Burch

6986
6987 Community Type: Mesic and hydric pine flatwoods.

6988
6989 Indicators of Inundation: Within the sample quadrat area, 11 vascular plant species noted
6990 were Facultative wetland indicator species, and four vascular plant species noted were
6991 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
6992 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine
6993 vascular plant species noted were Facultative wetland indicator species, and six vascular
6994 plant species noted were Obligate wetland indicator species on the National List of Plant
6995 Species that Occur in Wetlands (Reed 1998).

6996
6997
6998 Vascular Plant Species Encountered (Total = 30)

6999 Plants listed in the State of Florida Hydric Soil Field Indicators and
7000 National List of Plant Species that Occur in Wetlands are indicated,
7001 respectively, beneath each species as appropriate (see below, Vascular
7002 Plant Species Wetland Community Indicators).

7004	<i>Andropogon virginicus</i>	bluestem
7005	FAC, FAC-	
7006	<i>Asimina reticulata</i>	dog apple
7007	<i>Chaptalia tomentosa</i>	pineland daisy
7008	FACW, FACW	
7009	<i>Cirsium horridulum</i>	thistle
7010	-- , FAC+	
7011	<i>Crotalaria rotundifolia</i>	--
7012	<i>Dichanthelium</i> sp.	grass
7013	<i>Elyonurus tripsacoides</i>	grass
7014	FACW	
7015	<i>Erianthus giganteus</i>	plumegrass
7016	OBL, FACW	
7017	<i>Eupatorium leucolepis</i>	thorough-wort
7018	FACW, FACW+	
7019	<i>Eupatorium mikanioides</i>	semaphore eupatorium
7020	FACW, FACW	
7021	<i>Hypericum tetrapetalum</i>	--
7022	FAC, FACW	
7023	<i>Hyptis alata</i>	bush mint
7024	FACW, OBL	
7025	<i>Ilex glabra</i>	gallberry
7026	--, FACW	
7027	<i>Lachnanthes caroliniana</i>	bloodroot
7028	FAC, OBL	
7029	<i>Lachnocaulon anceps</i>	bog buttons

7030	FACW, OBL	
7031	<i>Lobelia glandulosa</i>	--
7032	FACW, OBL	
7033	<i>Lyonia fruticosa</i>	staggerbush
7034	--, FAC	
7035	<i>Muhlenbergia capillaris</i>	muhly grass
7036	OBL, FACU	
7037	<i>Myrica cerifera</i>	wax myrtle
7038	FAC, FAC+	
7039	<i>Pinus elliottii</i>	slash pine
7040	FACW, FACW	
7041	<i>Pluchea odorata</i>	fleabane
7042	FACW, FACW	
7043	<i>Rhynchospora divergens</i>	beakrush
7044	OBL, FACW	
7045	<i>Sabal palmetto</i>	sabal palm
7046	FAC, FAC	
7047	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
7048	FAC, FACW-	
7049	<i>Scleria</i> sp.	sedge
7050	<i>Smilax auriculata</i>	greenbriar
7051	<i>Solidago</i> sp.	goldenrod
7052	<i>Solidago stricta</i>	goldenrod
7053	FACW, OBL	
7054	* <i>Xyris jupicae</i>	yellow-eyed grass
7055	FACW, OBL	
7056	<i>Xyris</i> sp.	yellow-eyed grass
7057	OBL	

7058
7059

7060 Other Representative Plants Near, but Not Within Quadrat

7061		
7062	<i>Pityopsis graminifolia</i>	golden aster
7063	<i>Pterocaulon virgatum</i>	rabbit tobacco
7064	<i>Vaccinium myrsinites</i>	blue berry

7065

7066 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
7067 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
7068 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
7069 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
7070 contribute to the tree or shrub canopy layers.

7071

7072

7073

7074

7075

7076	<u>Species:</u>	<u>Meters Intercepted</u>
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7077

7078	<u>Tree Canopy</u>	<u>Exotics</u>
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7079	<i>Pinus elliottii</i>	<u>1.74</u>
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7080		1.74
7081	<u>Shrubs</u>	
7082	<i>Asimina reticulata</i>	0.22
7083	<i>Ilex glabra</i>	0.04
7084	<i>Myrica cerifera</i>	0.82
7085	<i>Serenoa repens</i>	<u>3.46</u>
7086		4.54
7087	<u>Epiphytes</u>	
7088		
7089	<u>Ground Cover</u>	
7090	<i>Andropogon virginicus</i>	1.52
7091	<i>Chaptalia tomentosa</i>	0.08
7092	<i>Crotalaria rotundifolia</i>	0.04
7093	<i>Dichanthelium</i> sp.	0.23
7094	<i>Elyonurus tripsacoides</i>	0.18
7095	<i>Eupatorium leucolepis</i>	0.01
7096	<i>Hypericum tetrapetalum</i>	0.75
7097	<i>Hyptis alata</i>	0.06
7098	<i>Lachnanthes caroliniana</i>	0.02
7099	<i>Lachnocaulon anceps</i>	0.64
7100	<i>Pluchea odorata</i>	0.02
7101	<i>Rhynchospora divergens</i>	0.02
7102	<i>Schizachyrium rhizomatum</i>	0.02
7103	<i>Scleria</i> sp.	0.21
7104	<i>Smilax auriculata</i>	0.22
7105	<i>Solidago</i> sp.	0.09
7106	<i>Solidago stricta</i>	0.05
7107	* <i>Xyris jupicae</i>	1.87 1.87
7108	<i>Xyris</i> sp.	<u>1.65</u>
7109		7.68 1.87

7110
7111
7112

7113 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
7114 wetland communities. Listing is from State of Florida Wetland Plant List (State of
7115 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
7116 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
7117 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

7118
7119
7120
7121
7122

7123 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
7126	FAC	4(18.2)	1(4.5)							20.2	19.2
7127	FW	11(50.0)	10(45.5)	100	100		3.5			51.5	15.4

7129	OBL	4(18.2)	6(27.3)							16.9	40.4
7130											
7131											
7132	1999										
7133		<u>Number of</u>		<u>Percent Cover</u>							
7134		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
7135		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
7136	FAC	6(20.0)	4(13.3)			18.1	18.1			30.1	
7137	FW	11(36.7)	9(30.0)	100	100		1.3			35.5	14.1
7138	OBL	4(13.3)	6(20.0)							21.7	34.4
7139											
7140											



Site 7, north of piezometer.



Site 7, east of piezometer.



Site 7, south of piezometer.



Site 7, west of piezometer.

7149 **Site 8.**
7150
7151 Site 8 was not available for analysis.
7152
7153
7154
7155

7155 **Site 9.**
7156
7157 Date of Cover Measures: 18 July, 1999.
7158
7159 Investigators: Burch, Hendricks
7160
7161 Community Type: Prairie; burned ca. 6 mo. previous, showing much evidence of fire.
7162
7163 Indicators of Inundation: Within the sample quadrat area, seven vascular plant species
7164 noted were Facultative wetland indicator species, and six vascular plant species noted
7165 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
7166 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Ten
7167 vascular plant species noted were Facultative wetland indicator species, and two vascular
7168 plant species noted were Obligate wetland indicator species on the National List of Plant
7169 Species that Occur in Wetlands (Reed 1998).
7170
7171 Vascular Plant Species Encountered (Total = 22)
7172 Plants listed in the State of Florida Hydric Soil Field Indicators and
7173 National List of Plant Species that Occur in Wetlands are indicated,
7174 respectively, beneath each species as appropriate (see below, Vascular
7175 Plant Species Wetland Community Indicators).
7176
7177 *Andropogon glomeratus* bushybeard bluestem
7178 FACW, FACW+
7179 *Cassytha filiformis* love vine
7180 -- , FAC-
7181 *Cladium jamaicense* saw grass
7182 OBL, OBL
7183 *Dichanthelium* sp 1. grass
7184 *Dichanthelium* sp 2. grass
7185 *Dichondra carolinensis* pony foot
7186 FAC, FACW-
7187 *Dichromena colorata* white_top sedge
7188 FACW, FACW
7189 *Euphorbia polyphylla* spurge
7190 FACW, --
7191 *Flaveria linearis* yellowtop
7192 FACW, FACW
7193 *Heliotropium polyphyllum* pineland heliotrope
7194 FAC, FAC
7195 *Linum medium* yellow flax
7196 FAC, FAC
7197 *Muhlenbergia capillaris* muhly grass
7198 OBL, FACU
7199 *Panicum tenerum* bluejoint panicum
7200 OBL, FACW
7201 *Paspalum monostachyum* gulfcoast paspalum
7202 OBL, FACW
7203 *Phragmites australis* reed

7204	OBL, FACW	
7205	<i>Pluchea odorata</i>	fleabane
7206	FACW, FACW	
7207	<i>Polygala balduinii</i>	--
7208	FACW, FACW	
7209	<i>Polygala grandiflora</i>	candyroot
7210	FACW, --	
7211	<i>Rhynchospora divergens</i>	beakrush
7212	OBL, FACW	
7213	<i>Samolus ebracteatus</i>	pimpernel
7214	OBL, OBL	
7215	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
7216	FAC, FACW-	
7217	<i>Setaria geniculata</i>	knotroot bristlegrass
7218	FAC, FAC	
7219		
7220		

Other Representative Plants Near, but Not Within Quadrat

7222	<i>Aristida affinis</i>	wiregrass
7223	OBL, OBL	
7224	<i>Aster tenuifolius</i>	aster
7225	OBL, OBL	
7226	<i>Mitreola sessiliflora</i>	miterwort
7227	FACW, --	
7228	<i>Sabal palmetto</i>	sabal palm
7229	FAC, FAC	

7230

7231 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
7232 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
7233 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
7234 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
7235 contribute to the tree or shrub canopy layers.

7236

7237

7238 Species: Meters Intercepted

7239

7240 Tree Canopy Exotics

7241

7242 Shrubs

7243

7244 Epiphytes

7245

7246

7247 Ground Cover

7248 *Cladium jamaicense* 0.34

7249 *Dichanthelium* sp 1. 0.49

7250 *Dichondra carolinensis* 0.14

7251 *Dichromena colorata* 0.10

7252	<i>Euphorbia polyphylla</i>	0.17
7253	<i>Flaveria linearis</i>	0.11
7254	<i>Linum medium</i>	0.01
7255	<i>Muhlenbergia capillaris</i>	1.97
7256	<i>Panicum tenerum</i>	0.33
7257	<i>Paspalum monostachyum</i>	0.12
7258	<i>Phragmites australis</i>	0.10
7259	<i>Pluchea odorata</i>	0.01
7260	<i>Rhynchospora divergens</i>	2.13
7261	<i>Schizachyrium rhizomatum</i>	0.66
7262	<i>Setaria geniculata</i>	<u>0.02</u>
7263		6.70

7264

7265 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 7266 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 7267 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 7268 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 7269 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

7270

7271 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
7275	FAC	5(25.0)	3(15.0)						5.2	
7276	FW	6(30.0)	10(50.0)						45.2	58.5
7277	OBL	7(35.0)	2(10.0)						48.6	1.2

7278

7279

7280 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
7284	FAC	5(22.7)	3(13.6)						12.4	0.4
7285	FW	7(31.8)	11(50.0)						5.8	55.2
7286	OBL	7(31.8)	2(9.1)						74.5	5.1

7287

7288



7289

7290 Site 9, north of piezometer.



Site 9, east of piezometer.

7291
7292



Site 9, south of piezometer.



Site 9, west of piezometer.

7293
7294
7295
7296
7297

7298 **Site 10.**

7299

7300 Date of Cover Measures: 27 March, 1999.

7301

7302 Investigators: Burch

7303

7304 Community Type: Cypress slough; appears to have burned about two months previous.

7305

7306 Indicators of Inundation: Within the sample quadrat area, seven vascular plant species
7307 noted were Facultative wetland indicator species, and five vascular plant species noted
7308 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
7309 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Ten
7310 vascular plant species noted were Facultative wetland indicator species, and four vascular
7311 plant species noted were Obligate wetland indicator species on the National List of Plant
7312 Species that Occur in Wetlands (Reed 1998).

7313

7314 Vascular Plant Species Encountered (Total = 22)

Plants listed in the State of Florida Hydric Soil Field Indicators and National List of Plant Species that Occur in Wetlands are indicated, respectively, beneath each species as appropriate (see below, Vascular Plant Species Wetland Community Indicators).

7319

7320 *Baccharis halimifolia* salt bush

7321 FAC, FAC

7322 *Blechnum serrulatum* blechnum fern

7323 FACW, FACW+

7324 *Boehmeria cylindrica* false nettle

7325 OBL, FACW+

7326 *Centella asiatica* spadeleaf

7327 FACW, FACW

7328 *Cladium jamaicense* saw grass

7329 OBL, OBL

7330 *Dichanthelium* sp. grass

7331	<i>Dichromena colorata</i>	white_top sedge
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7332 FACW, FACW

7333 *Eupatorium capillifolium* dog fennel

7334 FAC, --

7335 *Eustachys glauca* grass

7336 FACW, FACW

7337 *Ipomoea sagittata* morning glory

7338 --, FACW

7339	<i>Mikania scandens</i>	hempweed
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7340 --, FACW+

7341 *Myrica cerifera* wax myrtle

7342 FAC, FAC+

7343	<i>Paspalum monostachyum</i>	gulfcoast paspalum
------	------------------------------	--------------------

7344 OBL, FACW

7345 *Pluchea odorata* fleabane

7346	FACW, FACW	
7347	<i>Rhynchospora inundata</i>	horned beakrush
7348	OBL, OBL	
7349	<i>Sabal palmetto</i>	sabal palm
7350	FAC, FAC	
7351	<i>Taxodium distichum</i>	bald cypress
7352	OBL, OBL	
7353	<i>Teucrium canadense</i>	germander
7354	FACW, FACW-	
7355	unk. Rubiaceae	
7356	unk. herb 1	
7357	unk. herb 2	
7358	unk. herb 3	

7359

7360 Other Representative Plants Near, but Not Within Quadrat

7361		
7362	<i>Ilex cassine</i>	dahoon holly
7363	OBL, FACW	
7364	<i>Ludwigia octovalvis</i>	water primrose
7365	OBL, OBL	
7366	* <i>Schinus terebinthifolius</i>	Brazilian pepper
7367	FAC, FAC	
7368	<i>Osmunda regalis</i>	royal fern
7369	OBL, OBL	
7370	<i>Persea borbonia</i>	red bay
7371	--, FACW	
7372	<i>Tillandsia fasciculata</i>	air plant

7373

7374 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
7375 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
7376 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
7377 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
7378 contribute to the tree or shrub canopy layers.

7379

7380

7381 Species: Meters Intercepted

7382

7383 Tree Canopy Exotics

7384 *Taxodium distichum* 7.88

7385 7.88

7386 Shrubs

7387

7388 Epiphytes

7389

7390 Ground Cover

7391 *Baccharis halimifolia* 0.11

7392 *Blechnum serrulatum* 0.16

7393 *Centella asiatica* 2.73

7394 *Cladium jamaicense* 0.01

7395 *Dichanthelium* sp. 0.46

7396	<i>Dichromena colorata</i>	0.12
7397	<i>Eupatorium capillifolium</i>	0.18
7398	<i>Eustachys glauca</i>	0.11
7399	<i>Ipomoea sagittata</i>	0.54
7400	<i>Mikania scandens</i>	0.59
7401	<i>Myrica cerifera</i>	0.04
7402	<i>Paspalum monostachyum</i>	0.99
7403	<i>Pluchea odorata</i>	0.03
7404	<i>Rhynchospora inundata</i>	0.47
7405	<i>Taxodium distichum</i>	0.07
7406	<i>Teucrium canadense</i>	0.44
7407	unk. Rubiaceae	0.04
7408	unk. herb 1	0.05
7409	unk. herb 2	<u>0.10</u>
7410		7.24

7411

7412 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 7413 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 7414 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 7415 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 7416 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

7417

7418 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
7422	FAC	6(20.7)	3(10.3)			10.1	10.1			11.2	0.8
7423	FW	8(27.6)	15(51.7)				1.8			26.6	84.0
7424	OBL	8(27.6)	5(17.2)	100	100	88.2	88.2			56.5	10.7

7425

7426

7427 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
7431	FAC	4(18.2)	3(13.6)							4.6	2.1
7432	FW	6(27.3)	10(45.5)							49.6	78.9
7433	OBL	5(22.7)	3(13.6)	100	100					21.3	7.6

7434

7435



Site 10, north of piezometer.



Site 10, east of piezometer.



Site 10, south of piezometer.



Site 10, west of piezometer.

7444 **Site 11.**

7445

7446 Date of Cover Measures: 24 November, 1999.

7447

7448 Investigators: Burch, Hendricks, Barnes, Evans

7449

7450 Community Type: Prairie and hydric pine ecotone with recent sabal colonization.

7451

7452 Indicators of Inundation: Within the sample quadrat area, five vascular plant species
 7453 noted were Facultative wetland indicator species, and one vascular plant species noted
 7454 was an Obligate wetland indicator species on the State of Florida Wetland Plant List
 7455 (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998).
 7456 Seven vascular plant species noted were Facultative wetland indicator species, and one
 7457 vascular plant species noted was an Obligate wetland indicator species on the National
 7458 List of Plant Species that Occur in Wetlands (Reed 1998).

7459

7460 Vascular Plant Species Encountered (Total = 32)

7461 Plants listed in the State of Florida Hydric Soil Field Indicators and
 7462 National List of Plant Species that Occur in Wetlands are indicated,
 7463 respectively, beneath each species as appropriate (see below, Vascular
 7464 Plant Species Wetland Community Indicators).

7465

7466	<i>Andropogon virginicus</i>	bluestem
7467	FAC, FAC-	
7468	<i>Baccharis halimifolia</i>	salt bush
7469	FAC, FAC	
7470	<i>Bidens alba</i>	beggar ticks
7471	FAC, FACW-	
7472	<i>Blechnum serrulatum</i>	blechnum fern
7473	FACW, FACW+	
7474	<i>Callicarpa americana</i>	beauty berry
7475	<i>Cynanchum scoparium</i>	swallowwort
7476	<i>Dichanthelium</i> sp.	grass
7477	<i>Eustachys glauca</i>	grass
7478	FACW, FACW	
7479	<i>Galactea regularis</i>	milk pea
7480	<i>Habenaria</i> sp.	orchid
7481	FACW, FACW	
7482	* <i>Melochia corchorifolia</i>	chocolate weed
7483	FAC, FAC	
7484	<i>Myrica cerifera</i>	wax myrtle
7485	FAC, FAC+	
7486	<i>Nephrolepis</i> sp.	sword fern
7487	<i>Paspalum ciliatifolium</i>	grass
7488	<i>Paspalum monostachyum</i>	gulfcoast paspalum
7489	OBL, FACW	
7490	<i>Passiflora suberosa</i>	wild passion vine
7491	<i>Phlebodium aureum</i>	golden serpent fern
7492	<i>Pinus elliotii</i>	slash pine
7493	FACW, FACW	

7494	<i>Psilotum nudum</i>	whisk fern
7495	<i>Quercus laurifolia</i>	laurel oak
7496	FACW, FACW	
7497	<i>Rhus copallina</i>	sumac
7498	<i>Ruellia caroliniensis</i>	wild petunia
7499	FAC, --	
7500	<i>Sabal palmetto</i>	sabal palm
7501	FAC, FAC	
7502	* <i>Schinus terebinthifolius</i>	Brazilian pepper
7503	FAC, FAC	
7504	<i>Smilax auriculata</i>	greenbriar
7505	<i>Solidago</i> sp.	goldenrod
7506	* <i>Sporobolus indicus</i>	smutgrass
7507	<i>Stenandrium dulce</i>	sweet shaggytuft
7508	--, OBL	
7509	<i>Toxicodendron radicans</i>	poison ivy
7510	--, FAC	
7511	<i>Vitis munsoniana</i>	muscadine grape
7512	--, FAC	
7513	<i>Vittaria lineata</i>	shoestring fern
7514	--, FAC	

Other Representative Plants Near, but Not Within Quadrat

7517		
7518	<i>Aeschnomene americana</i>	--
7519	--, FAC	
7520	<i>Coreopsis leavenworthii</i>	tickseed
7521	FACW, FACW	
7522	<i>Desmodium paniculatum</i>	--
7523	<i>Iresine diffusa</i>	blood leaf
7524	<i>Pluchea odorata</i>	fleabane
7525	FACW, FACW	
7526	<i>Psychotria nervosa</i>	wild coffee
7527	FAC, --	
7528	<i>Pteridium aquilinum</i>	bracken fern
7529	<i>Pterocaulon virgatum</i>	rabbit tobacco
7530	<i>Smilax laurifolia</i>	greenbriar
7531	FACW+	
7532	unk. herb	

7533

Cover Measures: Meters of transect line intercepts of vascular plant species within 10m X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting four randomly selected 10m transects within the sample quadrat. Epiphytes includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but contribute to the tree or shrub canopy layers.

7539

7540

7541	<u>Species:</u>	<u>Meters Intercepted</u>
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7542

7543	<u>Tree Canopy</u>	<u>Exotics</u>
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7544	<i>Pinus elliottii</i>	1.49
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7545	<i>Rhus copallina</i>	0.08	
7546	<i>Sabal palmetto</i>	<u>5.94</u>	
7547		7.51	
7548	<u>Shrubs</u>		
7549	<i>Myrica cerifera</i>	0.03	
7550	<i>Sabal palmetto</i>	<u>3.82</u>	
7551		4.12	
7552	<u>Epiphytes</u>		
7553	<i>Cynanchum scoparium</i>	0.01	
7554	<i>Passiflora suberosa</i>	0.01	
7555	<i>Phlebodium aureum</i>	0.12	
7556	<i>Vittaria lineata</i>	<u>0.02</u>	
7557		0.16	
7558	<u>Ground Cover</u>		
7559	<i>Andropogon virginicus</i>	0.20	
7560	<i>Baccharis halimifolia</i>	0.03	
7561	<i>Bidens alba</i>	0.11	
7562	<i>Dichanthelium</i> sp.	0.21	
7563	<i>Eustachys glauca</i>	0.05	
7564	<i>Melochia corchorifolia</i>	0.02	0.02
7565	<i>Nephrolepis</i> sp.	0.07	
7566	<i>Paspalum monostachyum</i>	0.07	
7567	<i>Rhus copallina</i>	0.03	
7568	<i>Sabal palmetto</i>	0.04	
7569	<i>Schinus terebinthifolius</i>	0.01	0.01
7570	<i>Solidago</i> sp.	0.03	
7571	<i>Stenandrium dulce</i>	0.01	
7572	<i>Toxicodendron radicans</i>	0.14	
7573	<i>Vitis munsoniana</i>	0.09	
7574	unk. herb	<u>0.04</u>	
7575		1.15	0.03

7576

7577 Vascular Plant Species Wetland Community Indicators. Vascular plants that indicate

7578 wetland communities. Listing is from State of Florida Wetland Plant List (State of

7579 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and

7580 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;

7581 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

7582										
7583										
7584										
7585										
7586										
7587	1997									
7588		<u>Number of</u>				<u>Percent Cover</u>				
7589		<u>Species</u>				<u>Shrubs</u>		<u>Epiphytes</u>	<u>Ground Cover</u>	
7590		<u>FL(%)</u> <u>Fed(%)</u>	<u>Trees</u>		<u>FL</u> <u>Fed</u>	<u>FL</u> <u>Fed</u>	<u>FL</u> <u>Fed</u>	<u>FL</u> <u>Fed</u>	<u>FL</u> <u>Fed</u>	
7591	FAC	9(33.3) 8(29.6)	19.5	19.5	95.7	95.7			25.6	33.2
7592	FW	7(25.9) 8(29.6)	80.5	80.5					3.2	24.4
7593	OBL	2(7.4) 1(3.7)							22.4	11.6

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7595
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7601
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7603

1999

<u>Number of</u>			<u>Percent Cover</u>							
<u>Species</u>			<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
FAC	8(24.2)	8(24.2)	79.1	79.1	100	100		12.5	35.6	28.7
FW	5(15.2)	8(21.2)	19.8	19.8					4.3	13.9
OBL	1(3.0)	1(3.0)								0.9



Site 11, north of piezometer.



Site 11, east of piezometer.

7604
7605
7606
7607



Site 11, south of piezometer.



Site 11, west of piezometer.

7608
7609
7610
7611
7612

7612 **Site 12.**
7613
7614 Date of Cover Measures: 12August, 1999.
7615
7616 Investigators: Burch, Hendricks
7617
7618 Community Type: Sabal palm hammock.
7619
7620 Indicators of Inundation: Within the sample quadrat area, three vascular plant species
7621 noted were Facultative wetland indicator species on the State of Florida Wetland Plant
7622 List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al.
7623 1998). Five vascular plant species noted were Facultative wetland indicator species on
7624 the National List of Plant Species that Occur in Wetlands (Reed 1998).
7625
7626 Vascular Plant Species Encountered (Total = 37)
7627 Plants listed in the State of Florida Hydric Soil Field Indicators and
7628 National List of Plant Species that Occur in Wetlands are indicated,
7629 respectively, beneath each species as appropriate (see below, Vascular
7630 Plant Species Wetland Community Indicators).
7631
7632 *Aeschnomene americana* --
7633 --, FAC
7634 *Ambrosia artemesiifolia* ragweed
7635 *Ampelopsis arborea* pepper vine
7636 *Andropogon virginicus* bluestem
7637 FAC, FAC-
7638 *Baccharis halimifolia* salt bush
7639 FAC, FAC
7640 *Berchemia scandens* rattan vine
7641 --, FAC-
7642 *Bidens alba* beggar ticks
7643 FAC, FACW-
7644 *Blechnum serrulatum* blechnum fern
7645 FACW, FACW+
7646 *Bumelia celastrina* buckthorn
7647 FAC, --
7648 *Callicarpa americana* beauty berry
7649 *Conoclinium coelestinum* mist flower
7650 FAC, FAC
7651 *Conyza canadensis* dwarf horseweed
7652 *Cynanchum scoparium* swallowwort
7653 *Desmodium paniculatum* --
7654 *Dichanthelium* sp 1. grass
7655 *Dichanthelium* sp 2. grass
7656 *Dichondra carolinensis* pony foot
7657 FAC, FACW-
7658 *Eustachys glauca* grass
7659 FACW, FACW
7660 *Habenaria* sp. orchid
7661 FACW, FACW
7662 *Iresine diffusa* blood leaf

7663	<i>Myrica cerifera</i>	wax myrtle
7664	FAC, FAC+	
7665	<i>Parthenocissus quinquefolia</i>	Virginia creeper
7666	--, FAC	
7667	<i>Paspalum ciliatum</i>	grass
7668	<i>Phlebodium aureum</i>	golden serpent fern
7669	<i>Physalis viscosa</i>	ground cherry
7670	<i>Psilotum nudum</i>	whisk fern
7671	<i>Pteridium aquilinum</i>	bracken fern
7672	<i>Rapanea punctata</i>	myrsine
7673	FAC, FAC	
7674	<i>Sabal palmetto</i>	sabal palm
7675	FAC, FAC	
7676	* <i>Schinus terebinthifolius</i>	Brazilian pepper
7677	FAC, FAC	
7678	<i>Smilax auriculata</i>	greenbriar
7679	<i>Solidago</i> sp.	goldenrod
7680	* <i>Sporobolus indicus</i>	smutgrass
7681	<i>Toxicodendron radicans</i>	poison ivy
7682	--, FAC	
7683	<i>Vitis munsoniana</i>	muscadine grape
7684	--, FAC	
7685	<i>Vittaria lineata</i>	shoestring fern
7686	--, FAC	
7687	unk. herb	

7688

7689 Other Representative Plants Near, but Not Within Quadrat

7690	<i>Persea borbonia</i>	red bay
7691	--, FACW	
7692	<i>Polypremum procumbens</i>	rustweed
7693	<i>Psychotria nervosa</i>	wild coffee
7694	FAC, --	
7695	<i>Quercus laurifolia</i>	laurel oak
7696	FACW, FACW	

7697

7698 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m

7699 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting

7700 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true

7701 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but

7702 contribute to the tree or shrub canopy layers.

7703			
7704	<u>Species:</u>	<u>Meters Intercepted</u>	
7705			
7706	<u>Tree Canopy</u>		<u>Exotics</u>
7707	<i>Sabal palmetto</i>	<u>6.77</u>	
7708		<u>6.77</u>	
7709	<u>Shrubs</u>		
7710	<i>Bumelia celastrina</i>	0.04	
7711	<i>Callicarpa americana</i>	0.11	
7712	<i>Sabal palmetto</i>	4.86	
7713	<i>Schinus terebinthifolius</i>	<u>0.08</u>	<u>0.08</u>

7714		5.09	0.08
7715	<u>Epiphytes</u>		
7716	<i>Cynanchum scoparium</i>	0.03	
7717	<i>Phlebodium aureum</i>	0.52	
7718	<i>Smilax auriculata</i>	0.08	
7719	<i>Vitis munsoniana</i>	0.35	
7720	<i>Vittaria lineata</i>	<u>0.08</u>	
7721		1.06	
7722	<u>Ground Cover</u>		
7723	<i>Ambrosia artemesiifolia</i>	0.03	
7724	<i>Ampelopsis arborea</i>	0.05	
7725	<i>Andropogon virginicus</i>	0.20	
7726	<i>Baccharis halimifolia</i>	0.12	
7727	<i>Berchemia scandens</i>	0.40	
7728	<i>Bidens alba</i>	0.75	
7729	<i>Blechnum serrulatum</i>	0.04	
7730	<i>Callicarpa americana</i>	0.09	
7731	<i>Conoclinium coelestinum</i>	0.01	
7732	<i>Conyza canadensis</i>	0.01	
7733	<i>Desmodium paniculatum</i>	0.02	
7734	<i>Dichanthelium</i> sp 1.	0.17	
7735	<i>Dichondra carolinensis</i>	0.03	
7736	<i>Eustachys glauca</i>	0.09	
7737	<i>Iresine diffusa</i>	0.05	
7738	<i>Parthenocissus quinquefolia</i>	0.01	
7739	<i>Paspalum ciliatum</i>	0.02	
7740	<i>Phlebodium aureum</i>	0.81	
7741	<i>Psilotum nudum</i>	0.03	
7742	<i>Pteridium aquilinum</i>	0.62	
7743	<i>Sabal palmetto</i>	0.09	
7744	<i>Smilax auriculata</i>	0.62	
7745	* <i>Sporobolus indicus</i>	0.17	0.17
7746	<i>Toxicodendron radicans</i>	0.38	
7747	<i>Vitis munsoniana</i>	1.00	
7748	<i>Vittaria lineata</i>	0.03	
7749	unk. herb	<u>0.01</u>	
7750		5.85	0.17

7751

7752

7753 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
7754 wetland communities. Listing is from State of Florida Wetland Plant List (State of
7755 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
7756 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
7757 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

7758

7759 1997

7760

7761	<u>Number of</u>		<u>Percent Cover</u>							
7762	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
7763	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>

7764	FAC	10(32.3)	11(35.5)	91.8	91.8	85.9	85.9		50.5	35.2	31.5
7765	FW	3(9.7)	7(22.6)	8.2	8.2	14.1	14.1				
7766	OBL										

7767

7768

7769 1999

		<u>Number of Species</u>		<u>Percent Cover</u>							
				<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
7772											
7773	FAC	10(27.0)	11(29.7)	100	100	97.8	97.1		40.6	20.5	38.3
7774	FW	3(8.1)	5(13.5)							2.2	15.6
7775	OBL										

7776

7777

7778



Site 12, north of piezometer.



Site 12, east of piezometer.

7779

7780

7781

7782



Site 12, south of piezometer.



Site 12, west of piezometer.

7783

7784

7785

7786

7787

7787
 7788 **Site 13.**
 7789
 7790 Date of Cover Measures: 18 July, 1999.
 7791
 7792 Investigators: Burch, Hendricks
 7793
 7794 Community Type: Sandy marl prairie. Some disturbance to soils, possibly from fire
 7795 breaks. The area burned ca. six mo. previous. Soils are dry on surface, after much rain the
 7796 previous several weeks.
 7797
 7798 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
 7799 were Facultative wetland indicator species, and three vascular plant species noted were
 7800 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
 7801 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Ten
 7802 vascular plant species noted were Facultative wetland indicator species, and one vascular
 7803 plant species noted was an Obligate wetland indicator species on the National List of
 7804 Plant Species that Occur in Wetlands (Reed 1998).
 7805
 7806 Vascular Plant Species Encountered (Total = 22)
 7807 Plants listed in the State of Florida Hydric Soil Field Indicators and
 7808 National List of Plant Species that Occur in Wetlands are indicated,
 7809 respectively, beneath each species as appropriate (see below, Vascular
 7810 Plant Species Wetland Community Indicators).
 7811
 7812 *Andropogon glomeratus* bushybeard bluestem
 7813 FACW, FACW+
 7814 *Baccharis halimifolia* salt bush
 7815 FAC, FAC
 7816 **Borreria verticillata* --
 7817 *Cirsium horridulum* thistle
 7818 -- , FAC+
 7819 *Conoclinium coelestinum* mist flower
 7820 FAC, FAC
 7821 *Elytraria caroliniensis* scalystem
 7822 FAC, FACW
 7823 *Eupatorium mikanioides* semaphore eupatorium
 7824 FACW, FACW
 7825 *Euphorbia polyphylla* spurge
 7826 FACW, --
 7827 *Flaveria linearis* yellowtop
 7828 FACW, FACW
 7829 *Heliotropium polyphyllum* pineland heliotrope
 7830 FAC, FAC
 7831 *Hymenocallis palmeri* spider lilly
 7832 OBL, OBL
 7833 *Ipomoea sagittata* morning glory
 7834 --, FACW
 7835 **Lippia nodiflora* carpetweed

7836	<i>Mikania scandens</i>	hempweed
7837	--, FACW+	
7838	<i>Muhlenbergia capillaris</i>	muhly grass
7839	OBL, FACU	
7840	<i>Paspalum monostachyum</i>	gulfcoast paspalum
7841	OBL, FACW	
7842	<i>Physalis viscosa</i>	ground cherry
7843	<i>Piriqueta caroliniana</i>	stripeseed
7844	<i>Pluchea odorata</i>	fleabane
7845	FACW, FACW	
7846	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
7847	FAC, FACW-	
7848	<i>Vernonia blodgettii</i>	ironweed
7849	FACW, FACW-	
7850	unk. herb	

7851
7852 Other Representative Plants Near, but Not Within Quadrat

7853		
7854	<i>Callicarpa americana</i>	beauty berry
7855	<i>Cladium jamaicense</i>	saw grass
7856	OBL, OBL	
7857	<i>Eupatorium capillifolium</i>	dog fennel
7858	FAC, --	
7859	<i>Phlebodium aureum</i>	golden serpent fern
7860	<i>Sabal palmetto</i>	sabal palm
7861	FAC, FAC	
7862	* <i>Schinus terebinthifolius</i>	Brazilian pepper
7863	FAC, FAC	
7864	<i>Setaria geniculata</i>	knotroot bristlegrass
7865	FAC, FAC	

7866
7867 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
7868 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
7869 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
7870 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
7871 contribute to the tree or shrub canopy layers.

7872		
7873		
7874	<u>Species:</u>	<u>Meters Intercepted</u>
7875		
7876	<u>Tree Canopy</u>	<u>Exotics</u>
7877		
7878	<u>Shrubs</u>	
7879		
7880	<u>Epiphytes</u>	
7881		
7882	<u>Ground Cover</u>	
7883	<i>Andropogon glomeratus</i>	0.43
7884	<i>Borreria verticillata</i>	0.44 0.44

7885	<i>Elytraria caroliniensis</i>	0.13	
7886	<i>Eupatorium mikanioides</i>	0.09	
7887	<i>Euphorbia polyphylla</i>	0.51	
7888	<i>Flaveria linearis</i>	0.49	
7889	<i>Ipomoea sagittata</i>	0.04	
7890	<i>Mikania scandens</i>	0.02	
7891	<i>Muhlenbergia capillaris</i>	0.10	
7892	<i>Paspalum monostachyum</i>	1.42	
7893	<i>Physalis viscosa</i>	0.12	
7894	<i>Pluchea odorata</i>	0.31	
7895	<i>Schizachyrium rhizomatum</i>	0.25	
7896	<i>Vernonia blodgettii</i>	1.95	
7897	unk. herb	0.08	
7898		6.38	0.44

7899

7900 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
7901 wetland communities. Listing is from State of Florida Wetland Plant List (State of
7902 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
7903 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
7904 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

7905

7906 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
7909											
7910	FAC	5(23.8)	1(4.8)							33.9	0.8
7911	FW	7(33.3)	9(42.9)							11.2	78.2
7912	OBL	4(19.0)	2(9.5)							47.5	4.2

7913

7914

7915 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
7918											
7919	FAC	5(22.7)	3(13.6)							6.0	
7920	FW	6(27.3)	10(45.5)							59.2	80.4
7921	OBL	3(13.6)	1(4.5)							23.8	

7922



7923

7924 Site 13, north of piezometer.
7925
7926



Site 13, east of piezometer.



7927
7928 Site 13, south of piezometer.
7929
7930
7931

Site 13, west of piezometer.

7931 **Site 14.**
7932
7933 Date of Cover Measures: 24 November, 1999
7934
7935 Investigators: Burch, Hendricks, Barnes, Evans
7936
7937 Community Type: Prairie and hydric pine ecotone.
7938
7939 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
7940 were Facultative wetland indicator species, and four vascular plant species noted were
7941 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
7942 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine
7943 vascular plant species noted were Facultative wetland indicator species, and three
7944 vascular plant species noted were Obligate wetland indicator species on the National List
7945 of Plant Species that Occur in Wetlands (Reed 1998).
7946
7947 Vascular Plant Species Encountered (Total = 25)
7948 Plants listed in the State of Florida Hydric Soil Field Indicators and
7949 National List of Plant Species that Occur in Wetlands are indicated,
7950 respectively, beneath each species as appropriate (see below, Vascular
7951 Plant Species Wetland Community Indicators).
7952
7953 *Andropogon glomeratus* bushybeard bluestem
7954 FACW, FACW+
7955 *Anemia adiantfolia* pineland fern
7956 *Berchemia scandens* rattan vine
7957 --, FAC-
7958 *Callicarpa americana* beauty berry
7959 *Cassytha filiformis* love vine
7960 --, FAC-
7961 *Cladium jamaicense* saw grass
7962 OBL, OBL
7963 *Conoclinium coelestinum* mist flower
7964 FAC, FAC
7965 *Elytraria caroliniensis* scalystem
7966 FAC, FACW
7967 *Flaveria linearis* yellowtop
7968 FACW, FACW
7969 *Ilex cassine* dahoon holly
7970 OBL, FACW
7971 *Myrica cerifera* wax myrtle
7972 FAC, FAC+
7973 *Parthenocissus quinquefolia* Virginia creeper
7974 --, FAC
7975 *Paspalum monostachyum* gulfcoast paspalum
7976 OBL, FACW
7977 *Passiflora suberosa* wild passion vine
7978 *Persea borbonia* red bay
7979 --, FACW
7980 *Pluchea odorata* fleabane

7981	FACW, FACW	
7982	<i>Polygala grandiflora</i>	candyroot
7983	FACW, --	
7984	* <i>Pteris vittata</i>	--
7985	<i>Sabal palmetto</i>	sabal palm
7986	FAC, FAC	
7987	* <i>Schinus terebinthifolius</i>	Brazilian pepper
7988	FAC, FAC	
7989	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
7990	FAC, FACW-	
7991	<i>Taxodium distichum</i>	bald cypress
7992	OBL, OBL	
7993	<i>Thelypteris normalis</i>	fern
7994	FACW, FACW	
7995	<i>Toxicodendron radicans</i>	poison ivy
7996	--, FAC	
7997	<i>Woodwardia virginica</i>	chain fern
7998	FACW, OBL	
7999		

Other Representative Plants Near, but Not Within Quadrat

8001		
8002	<i>Baccharis halimifolia</i>	salt bush
8003	FAC, FAC	
8004	<i>Coreopsis leavenworthii</i>	tickseed
8005	FACW, FACW	
8006	<i>Pinus elliotii</i>	slash pine
8007	FACW, FACW	
8008		
8009		

Cover Measures: Meters of transect line intercepts of vascular plant species within 10m X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting four randomly selected 10m transects within the sample quadrat. Epiphytes includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but contribute to the tree or shrub canopy layers.

8015			
8016			
8017			
8018			
8019	<u>Species:</u>	<u>Meters Intercepted</u>	
8020			
8021	<u>Tree Canopy</u>		<u>Exotics</u>
8022	<i>Callicarpa americana</i>	0.74	
8023	<i>Ilex cassine</i>	0.45	
8024	<i>Persea borbonia</i>	0.08	
8025	<i>Schinus terebinthifolius</i>	0.29	0.29
8026	<i>Taxodium distichum</i>	<u>0.35</u>	<u> </u>
8027		1.91	0.29
8028	<u>Shrubs</u>		
8029	<i>Callicarpa americana</i>	2.70	
8030	<i>Myrica cerifera</i>	0.34	

8031	<i>Taxodium distichum</i>	<u>0.02</u>	
8032		3.06	
8033	<u>Epiphytes</u>		
8034			
8035	<u>Ground Cover</u>		
8036	<i>Andropogon glomeratus</i>	0.10	
8037	<i>Anemia adiantfolia</i>	0.03	
8038	<i>Berchemia scandens</i>	0.03	
8039	<i>Callicarpa americana</i>	0.20	
8040	<i>Cassytha filiformis</i>	0.18	
8041	<i>Cladium jamaicense</i>	0.83	
8042	<i>Conoclinium coelestinum</i>	0.02	
8043	<i>Elytraria caroliniensis</i>	0.01	
8044	<i>Flaveria linearis</i>	0.02	
8045	<i>Parthenocissus quinquefolia</i>	0.02	
8046	<i>Paspalum monostachyum</i>	5.70	
8047	<i>Passiflora suberosa</i>	0.70	
8048	<i>Pluchea odorata</i>	0.02	
8049	<i>Polygala grandiflora</i>	0.01	
8050	* <i>Pteris vittata</i>	1.49	1.49
8051	<i>Sabal palmetto</i>	0.01	
8052	* <i>Schinus terebinthifolius</i>	0.02	0.02
8053	<i>Schizachyrium rhizomatum</i>	0.01	
8054	<i>Thelypteris normalis</i>	0.41	
8055	<i>Toxicodendron radicans</i>	0.03	
8056	<i>Woodwardia virginica</i>	0.05	
8057	unk. herb	<u>0.05</u>	
8058		9.94	1.51
8059			
8060			

Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate wetland communities. Listing is from State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative; FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

8072	1997										
8073		<u>Number of</u>		<u>Percent Cover</u>							
8074		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
8075		FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
8076	FAC	6(27.3)	6(27.3)			3.1	3.1			0.1	0.1
8077	FW	4(18.2)	5(22.7)							1.7	73.5
8078	OBL	4(18.2)	2(9.1)	100	100					89.7	16.3
8079											

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8088

1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
	FAC	6(24.0)	6(24.0)	15.2	15.2					0.7	1.0
	FW	6(24.0)	9(36.0)		27.7			11.1	11.1	6.1	63.1
	OBL	4(16.0)	3(12.0)	41.9	18.3			0.7	0.7	65.7	8.9



Site 14, north of piezometer.



Site 14, east of piezometer.

8089
8090
8091
8092



Site 14, south of piezometer.



Site 14, west of piezometer.

8093
8094
8095
8096
8097

8097

8098 **Site 15.**

8099

8100 Date of Cover Measures: 25 September, 1999.

8101

8102 Investigators: Burch

8103

8104 Community Type:

8105

8106 Indicators of Inundation: Within the sample quadrat area, eight vascular plant species
8107 noted were Facultative wetland indicator species on the State of Florida Wetland Plant
8108 List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al.
8109 1998). Eight vascular plant species noted were Facultative wetland indicator species, and
8110 one vascular plant species noted was an Obligate wetland indicator species on the
8111 National List of Plant Species that Occur in Wetlands (Reed 1998).
8112

8113 Vascular Plant Species Encountered (Total = 30)

8114 Plants listed in the State of Florida Hydric Soil Field Indicators and
8115 National List of Plant Species that Occur in Wetlands are indicated,
8116 respectively, beneath each species as appropriate (see below, Vascular
8117 Plant Species Wetland Community Indicators).
8118

8119	<i>Andropogon glomeratus</i>	bushybeard bluestem
8120	FACW, FACW+	
8121	<i>Ampelopsis arborea</i>	pepper vine
8122	<i>Baccharis halimifolia</i>	salt bush
8123	FAC, FAC	
8124	<i>Berchemia scandens</i>	rattan vine
8125	--, FAC-	
8126	<i>Blechnum serrulatum</i>	blechnum fern
8127	FACW, FACW+	
8128	* <i>Borreria verticillata</i>	--
8129	<i>Callicarpa americana</i>	beauty berry
8130	<i>Cornus foemina</i>	Florida dogwood
8131	FACW, FACW-	
8132	<i>Dichanthelium</i> sp.	grass
8133	<i>Habenaria</i> sp.	orchid
8134	FACW, FACW	
8135	<i>Ipomoea trichocarpa</i>	morning glory
8136	<i>Myrica cerifera</i>	wax myrtle
8137	FAC, FAC+	
8138	<i>Parthenocissus quinquefolia</i>	Virginia creeper
8139	--, FAC	
8140	<i>Persea borbonia</i>	red bay
8141	--, FACW	
8142	<i>Phlebodium aureum</i>	golden serpent fern
8143	<i>Pinus elliotii</i>	slash pine
8144	FACW, FACW	
8145	<i>Pteridium aquilinum</i>	bracken fern
8146	<i>Quercus laurifolia</i>	laurel oak
8147	FACW, FACW	

8148	<i>Quercus virginiana</i>	live oak
8149	<i>Rhus copallina</i>	sumac
8150	<i>Sabal palmetto</i>	sabal palm
8151	FAC, FAC	
8152	* <i>Schinus terebinthifolius</i>	Brazilian pepper
8153	FAC, FAC	
8154	<i>Serenoa repens</i>	saw palmetto
8155	<i>Smilax auriculata</i>	greenbriar
8156	<i>Thelypteris normalis</i>	fern
8157	FACW, FACW	
8158	<i>Toxicodendron radicans</i>	poison ivy
8159	--, FAC	
8160	* <i>Urena lobata</i>	Caesar weed
8161	<i>Vitis munsoniana</i>	muscadine grape
8162	--, FAC	
8163	<i>Vittaria lineata</i>	shoestring fern
8164	--, FAC	
8165	<i>Woodwardia virginica</i>	chain fern
8166	FACW, OBL	

8167

8168 Other Representative Plants Near, but Not Within Quadrat

8169	<i>Taxodium distichum</i>	bald cypress
8170	OBL, OBL	

8171

8172 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
8173 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
8174 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
8175 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
8176 contribute to the tree or shrub canopy layers.

8177

8178

8179	<u>Species:</u>	<u>Meters Intercepted</u>
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8180

8181	<u>Tree Canopy</u>	<u>Exotics</u>
------	--------------------	----------------

8182	<i>Quercus laurifolia</i>	6.45
------	---------------------------	------

8183	<i>Sabal palmetto</i>	5.00
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8184		11.45
------	--	-------

8185

8186 Shrubs

8187	<i>Baccharis halimifolia</i>	0.06
------	------------------------------	------

8188	<i>Cornus foemina</i>	1.88
------	-----------------------	------

8189	<i>Persea borbonia</i>	0.18
------	------------------------	------

8190	<i>Sabal palmetto</i>	0.31
------	-----------------------	------

8191	* <i>Schinus terebinthifolius</i>	<u>2.56</u> <u>2.56</u>
------	-----------------------------------	-------------------------

8192		4.99 2.56
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8193 Epiphytes

8194	<i>Berchemia scandens</i>	0.08
------	---------------------------	------

8195	<i>Parthenocissus quinquefolia</i>	0.06
------	------------------------------------	------

8196	<i>Smilax auriculata</i>	0.10
------	--------------------------	------

8197	<i>Toxicodendron radicans</i>	0.20
------	-------------------------------	------

8198	<i>Vitis munsoniana</i>	0.61
------	-------------------------	------

8199	<i>Vittaria lineata</i>	<u>0.09</u>
8200		1.14
8201		
8202	<u>Ground Cover</u>	
8203	<i>Ampelopsis arborea</i>	0.23
8204	<i>Berchemia scandens</i>	0.03
8205	<i>Blechnum serrulatum</i>	0.63
8206	<i>Dichanthelium</i> sp.	0.14
8207	<i>Habenaria</i> sp.	0.06
8208	<i>Parthenocissus quinquefolia</i>	0.12
8209	<i>Pinus elliotii</i>	0.06
8210	<i>Pteridium aquilinum</i>	0.08
8211	<i>Rhus copallina</i>	0.01
8212	<i>Serenoa repens</i>	0.13
8213	<i>Thelypteris normalis</i>	0.16
8214	<i>Toxicodendron radicans</i>	1.70
8215	<i>Vitis munsoniana</i>	0.46
8216	<i>Woodwardia virginica</i>	<u>0.05</u>
8217		3.86

8218

8219 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate

8220 wetland communities. Listing is from State of Florida Wetland Plant List (State of

8221 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and

8222 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;

8223 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

8224											
8225	1997										
8226		<u>Number of</u>		<u>Percent Cover</u>							
8227		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
8228		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8229	FAC	11(28.9)	13(34.2)	51.7	51.7	89.7	89.7	3.8	61.7	4.7	69.2
8230	FW	5(13.2)	6(15.8)	2.4	2.4	1.8	4.6		3.8	14.9	6.2
8231	OBL	1(2.6)	1(2.6)								

8232											
8233	1999										
8234		<u>Number of</u>		<u>Percent Cover</u>							
8235		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
8236		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8237	FAC	4(13.3)	8(26.7)	43.7	43.7	58.7	58.7		93.0		59.1
8238	FW	8(26.7)	8(26.7)	56.3	56.3	37.7	41.3			24.9	23.6
8239	OBL		1(3.3)								1.3

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Site 15, north of piezometer.



Site 15, east of piezometer.



Site 15, south of piezometer.



Site 15, west of piezometer.

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Site 16.

Date of Cover Measures: 25 September, 1999.

Investigators: Burch

Community Type: Cypress and hardwood forest.

Indicators of Inundation: Within the sample quadrat area, three vascular plant species noted were Facultative wetland indicator species, and three vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Six vascular plant species noted were Facultative wetland indicator species, and two vascular plant species noted were Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Vascular Plant Species Encountered (Total = 24)

Plants listed in the State of Florida Hydric Soil Field Indicators and National List of Plant Species that Occur in Wetlands are indicated, respectively, beneath each species as appropriate (see below, Vascular Plant Species Wetland Community Indicators).

<i>Acer rubrum</i>	red maple
FACW, FAC	
<i>Baccharis halimifolia</i>	salt bush
FAC, FAC	
<i>Bidens alba</i>	beggar ticks
FAC, FACW-	
<i>Blechnum serrulatum</i>	blechnum fern
FACW, FACW+	
<i>Cynanchum scoparium</i>	swallowwort
<i>Dichantherium</i> sp.	grass
<i>Ficus aurea</i>	strangler fig
FAC, FACW	
<i>Fraxinus caroliniana</i>	pop ash
OBL, OBL	
<i>Ilex cassine</i>	dahoon holly
OBL, FACW	
<i>*Oeceoclades maculata</i>	orchid
<i>Persea borbonia</i>	red bay
--, FACW	
<i>Psychotria nervosa</i>	wild coffee
FAC, --	
<i>Psychotria sulzneri</i>	wild coffee
FAC, --	
<i>Quercus laurifolia</i>	laurel oak
FACW, FACW	
<i>Rapanea punctata</i>	myrsine
FAC, FAC	

8301	<i>Sabal palmetto</i>	sabal palm
8302	FAC, FAC	
8303	* <i>Schinus terebinthifolius</i>	Brazilian pepper
8304	FAC, FAC	
8305	<i>Smilax auriculata</i>	greenbriar
8306	<i>Taxodium distichum</i>	bald cypress
8307	OBL, OBL	
8308	<i>Tillandsia setacea</i>	air plant
8309	<i>Tillandsia usneoides</i>	air plant
8310	<i>Toxicodendron radicans</i>	poison ivy
8311	--, FAC	
8312	* <i>Urena lobata</i>	Caesar weed
8313	<i>Vitis munsoniana</i>	muscadine grape
8314	--, FAC	
8315		

8316 Other Representative Plants Near, but Not Within Quadrat

8317	<i>Ampelopsis arborea</i>	pepper vine
8318	<i>Callicarpa americana</i>	beauty berry
8319	<i>Cornus foemina</i>	Florida dogwood
8320	FACW, FACW-	
8321		

8322 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
8323 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
8324 four randomly selected 10m transects within the sample quadrat.

8325			
8326	<u>Species:</u>	<u>Meters Intercepted</u>	
8327			
8328	<u>Tree Canopy</u>		<u>Exotics</u>
8329	<i>Acer rubrum</i>	4.19	
8330	<i>Ilex cassine</i>	0.40	
8331	<i>Sabal palmetto</i>	3.38	
8332	<i>Taxodium distichum</i>	<u>2.38</u>	
8333		10.35	
8334	<u>Shrubs</u>		
8335	<i>Ilex cassine</i>	0.19	
8336	<i>Ficus aurea</i>	0.22	
8337	<i>Sabal palmetto</i>	2.26	
8338	<i>Schinus terebinthifolius</i>	<u>0.34</u>	<u>0.34</u>
8339		3.01	0.34
8340			
8341	<u>Epiphytes</u>		
8342	<i>Smilax auriculata</i>	0.02	
8343	<i>Toxicodendron radicans</i>	0.21	
8344	<i>Vitis munsoniana</i>	<u>0.12</u>	
8345		0.35	
8346			
8347	<u>Ground Cover</u>		
8348	<i>Acer rubrum</i>	0.03	
8349	<i>Bidens alba</i>	0.14	
8350	<i>Blechnum serrulatum</i>	1.68	
8351	<i>Cynanchum scoparium</i>	0.01	

8352	<i>Fraxinus caroliniana</i>	0.05	
8353	<i>Oeceoclades maculata</i>	0.01	0.01
8354	<i>Psychotria sulzneri</i>	0.07	
8355	<i>Rapanea punctata</i>	0.08	
8356	<i>Toxicodendron radicans</i>	0.15	
8357	<i>Urena lobata</i>	0.21	0.21
8358	<i>Vitis munsoniana</i>	<u>0.06</u>	<u> </u>
8359		2.49	0.22

8360

8361 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
8362 wetland communities. Listing is from State of Florida Wetland Plant List (State of
8363 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
8364 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
8365 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

8366

8367 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
8370										
8371	FAC	6(24.0)	8(32.0)	39.0	72.7	96.6	96.2	94.1	4.6	17.1
8372	FW	4(16.0)	6(24.0)	35.6	1.9	2.4	2.8		75.4	78.9
8373	OBL	4(16.0)	3(12.0)	25.4	25.4	1.1	1.1		4.6	1.1

8374

8375

8376 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
8377										
8378										
8379										
8380	FAC	8(33.3)	7(29.1)	32.7	73.1	93.7	86.4	94.3	11.6	12.9
8381	FW	3(12.5)	6(25.0)	40.5	3.9				67.5	73.1
8382	OBL	3(12.5)	2(8.3)	26.9	23.0	6.3	13.6		2.0	2.0

8383

8384



8385 Site 16, north of piezometer.



8386 Site 16, east of piezometer.

8387

8388



Site 16, south of piezometer.



Site 16, west of piezometer.

8389
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8393

8393 **Site 17.**

8394

8395 Date of Cover Measures: 24 November, 1999

8396

8397 Investigators: Burch, Hendricks, Barnes, Evans.

8398

8399 Community Type: Cypress and hardwood slough, disturbed.

8400

8401 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
8402 were Facultative wetland indicator species, and four vascular plant species noted were
8403 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
8404 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Five
8405 vascular plant species noted were Facultative wetland indicator species, and five vascular
8406 plant species noted were Obligate wetland indicator species on the National List of Plant
8407 Species that Occur in Wetlands (Reed 1998).

8408

8409 Vascular Plant Species Encountered (Total = 29)

8410 Plants listed in the State of Florida Hydric Soil Field Indicators and
8411 National List of Plant Species that Occur in Wetlands are indicated,
8412 respectively, beneath each species as appropriate (see below, Vascular
8413 Plant Species Wetland Community Indicators).

8414

8415 *Acer rubrum* red maple

8416 FACW, FAC

8417 *Blechnum serrulatum* blechnum fern

8418 FACW, FACW+

8419 *Carex* sp. sedge

8420 FACW, --

8421 *Cissus sicyoides* possum grape

8422 *Cynanchum scoparium* swallowwort

8423 *Dichanthelium* sp. grass

8424 *Fraxinus caroliniana* pop ash

8425 OBL, OBL

8426 *Habenaria* sp. orchid

8427 FACW, FACW

8428 **Lantana camara* lantana

8429 *Oplismenus setarius* basket grass

8430 FAC, --

8431 *Osmunda regalis* royal fern

8432 OBL, OBL

8433 *Parthenocissus quinquefolia* Virginia creeper

8434 --, FAC

8435 *Persea borbonia* red bay

8436 --, FACW

8437 *Polypodium polypodioides* resurrection fern

8438 *Psychotria sulzneri* wild coffee

8439 FAC, --

8440 *Pteridium aquilinum* bracken fern

8441 *Quercus laurifolia* laurel oak

8442 FACW, FACW

8443 *Rapanea punctata* myrsine

8444	FAC, FAC	
8445	<i>Rhynchospora inundata</i>	horned beakrush
8446	OBL, OBL	
8447	<i>Sabal palmetto</i>	sabal palm
8448	FAC, FAC	
8449	<i>Sambucus canadensis</i>	elder
8450	FAC, FACW-	
8451	* <i>Schinus terebinthifolius</i>	Brazilian pepper
8452	FAC, FAC	
8453	<i>Taxodium distichum</i>	bald cypress
8454	OBL, OBL	
8455	<i>Tillandsia setacea</i>	air plant
8456	<i>Tillandsia usneoides</i>	air plant
8457	<i>Toxicodendron radicans</i>	poison ivy
8458	--, FAC	
8459	* <i>Urena lobata</i>	Caesar weed
8460	<i>Vitis munsoniana</i>	muscadine grape
8461	--, FAC	
8462	<i>Woodwardia virginica</i>	chain fern
8463	FACW, OBL	

8464

Other Representative Plants Near, but Not Within Quadrat

8465

8466		
8467	<i>Callicarpa americana</i>	beauty berry
8468	<i>Mikania scandens</i>	hempweed
8469	--, FACW+	
8470	<i>Passiflora suberosa</i>	wild passion vine
8471	<i>Tillandsia fasciculata</i>	air plant

8472

8473 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
8474 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
8475 four randomly selected 10m transects within the sample quadrat.

8476

8477 Species: Meters Intercepted

8478

8479	<u>Tree Canopy</u>	<u>Exotics</u>
8480	<i>Acer rubrum</i>	4.85
8481	<i>Fraxinus caroliniana</i>	0.75
8482	<i>Lantana camara</i>	0.20 0.20
8483	<i>Persea borbonia</i>	1.50
8484	<i>Sabal palmetto</i>	0.80
8485	<i>Sambucus canadensis</i>	0.60
8486	<i>Schinus terebinthifolius</i>	0.35 0.35
8487	<i>Taxodium distichum</i>	4.99
8488		14.04 0.55

8489

8490	<u>Shrubs</u>	
8491	<i>Persea borbonia</i>	0.38
8492	<i>Quercus laurifolia</i>	0.55
8493	<i>Sabal palmetto</i>	4.85
8494		5.78

8494 Epiphytes

8495	<i>Cissus sicyoides</i>	0.50	
8496	<i>Polypodium polypodioides</i>	0.07	
8497	<i>Tillandsia setacea</i>	0.08	
8498	<i>Tillandsia usneoides</i>	0.02	
8499	<i>Vitis munsoniana</i>	<u>1.36</u>	
8500		2.03	
8501	<u>Ground Cover</u>		
8502	<i>Blechnum serrulatum</i>	1.98	
8503	<i>Carex</i> sp.	0.24	
8504	<i>Cissus sicyoides</i>	0.05	
8505	<i>Cynanchum scoparium</i>	0.05	
8506	<i>Dichanthelium</i> sp.	0.05	
8507	<i>Habenaria</i> sp.	0.02	
8508	<i>Oplismenus setarius</i>	0.02	
8509	<i>Osmunda regalis</i>	0.08	
8510	<i>Parthenocissus quinquefolia</i>	0.01	
8511	<i>Sabal palmetto</i>	0.65	
8512	<i>Schinus terebinthifolius</i>	0.07	0.07
8513	<i>Toxicodendron radicans</i>	0.09	
8514	<i>Urena lobata</i>	0.02	0.02
8515	<i>Vitis munsoniana</i>	0.20	
8516	<i>Woodwardia virginica</i>	<u>0.15</u>	
8517		3.68	0.09

8518

8519

8520 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
8521 wetland communities. Listing is from State of Florida Wetland Plant List (State of
8522 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
8523 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
8524 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

8525

8526 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8529											
8530	FAC	5(17.9)	7(25.0)	19.3	57.5	100	100		100	20.6	52.1
8531	FW	6(21.4)	4(14.3)	41.9	17.6					27.3	28.9
8532	OBL	2(7.1)	3(10.7)	24.9	24.9						14.9

8533

8534

8535

8536 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8539											
8540	FAC	6(20.7)	7(24.1)	12.5	42.7	94.8	83.9		67.0	20.1	27.7
8541	FW	6(20.7)	5(17.2)	34.5	15.0	9.5	16.1			64.9	54.3
8542	OBL	4(13.8)	5(17.2)	40.9	40.9					2.2	6.3

8543

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Site 17, north of piezometer.

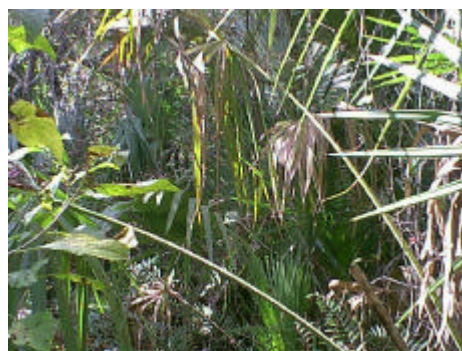


Site 17, east of piezometer.

8546
8547
8548



Site 17, south of piezometer.



Site 17, west of piezometer.

8549
8550
8551
8552
8553

8553 **Site 18.**

8554

8555 Date of Cover Measures: 18 July, 1999.

8556

8557 Investigators: Burch, Hendricks.

8558

8559 Community Type: Prairie. This area burned ca. four months previous.

8560

8561 Indicators of Inundation: Within the sample quadrat area, seven vascular plant species
8562 noted were Facultative wetland indicator species, and six vascular plant species noted
8563 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
8564 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Twelve
8565 vascular plant species noted were Facultative wetland indicator species, and three
8566 vascular plant species noted were Obligate wetland indicator species on the National List
8567 of Plant Species that Occur in Wetlands (Reed 1998).

8568

8569 Vascular Plant Species Encountered (Total = 20)

8570 Plants listed in the State of Florida Hydric Soil Field Indicators and
8571 National List of Plant Species that Occur in Wetlands are indicated,
8572 respectively, beneath each species as appropriate (see below, Vascular
8573 Plant Species Wetland Community Indicators).

8574

8575 *Andropogon glomeratus* bushybeard bluestem

8576 FACW, FACW+

8577 *Cladium jamaicense* saw grass

8578 OBL, OBL

8579 *Dichanthelium* sp. grass

8580 *Dichondra carolinensis* pony foot

8581 FAC, FACW-

8582 *Dichromena colorata* white_top sedge

8583 FACW, FACW

8584 *Eupatorium mikanioides* semaphore eupatorium

8585 FACW, FACW

8586 *Flaveria linearis* yellowtop

8587 FACW, FACW

8588 *Hymenocallis palmeri* spider lilly

8589 OBL, OBL

8590 *Ipomoea sagittata* morning glory

8591 --, FACW

8592 *Muhlenbergia capillaris* muhly grass

8593 OBL, FACU

8594 *Panicum tenerum* bluejoint panicum

8595 OBL, FACW

8596 *Paspalum monostachium* gulfcoast paspalum

8597 OBL, FACW

8598 *Piriqueta caroliniana* stripeseed

8599 *Pluchea odorata* fleabane

8600 FACW, FACW

8601 *Polygala grandiflora* candyroot

8602	FACW, --	
8603	<i>Rhynchospora divergens</i>	beakrush
8604	OBL, FACW	
8605	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
8606	FAC, FACW-	
8607	<i>Sporobolus</i> sp.	smutgrass
8608	<i>Stenandrium dulce</i>	sweet shaggytuft
8609	--, OBL	
8610	<i>Vernonia blodgettii</i>	ironweed
8611	FACW, FACW-	
8612		
8613		

8614 Other Representative Plants Near, but Not Within Quadrat

8615		
8616	<i>Aristida affinis</i>	wiregrass
8617	OBL, OBL	
8618	* <i>Borreria verticillata</i>	--
8619	<i>Eryngium balduinii</i>	snakeroot
8620	FAC, FACW+	
8621	<i>Heliotropium polyphyllum</i>	pineland heliotrope
8622	FAC, FAC	
8623	<i>Hyptis alata</i>	bush mint
8624	FACW, OBL	
8625		

8626 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
8627 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
8628 four randomly selected 10m transects within the sample quadrat.

8629
8630 Species: Meters Intercepted

8631		
8632	<u>Tree Canopy</u>	<u>Exotics</u>
8633		
8634	<u>Shrubs</u>	
8635		
8636	<u>Epiphytes</u>	
8637		

8638	<u>Ground Cover</u>	
8639	<i>Andropogon glomeratus</i>	0.07
8640	<i>Cladium jamaicense</i>	0.33
8641	<i>Dichanthelium</i> sp.	0.01
8642	<i>Dichondra carolinensis</i>	0.02
8643	<i>Dichromena colorata</i>	0.29
8644	<i>Eupatorium mikanioides</i>	0.01
8645	<i>Flaveria linearis</i>	0.23
8646	<i>Hymenocallis palmeri</i>	0.03
8647	<i>Ipomoea sagittata</i>	0.01
8648	<i>Muhlenbergia capillaris</i>	1.45
8649	<i>Panicum tenerum</i>	0.24
8650	<i>Paspalum monostachium</i>	1.77
8651	<i>Piriqueta caroliniana</i>	0.01

8652	<i>Pluchea odorata</i>	0.03
8653	<i>Polygala grandiflora</i>	0.01
8654	<i>Rhynchospora divergens</i>	0.10
8655	<i>Schizachyrium rhizomatum</i>	0.78
8656	<i>Sporobolus</i> sp.	0.11
8657	<i>Vernonia blodgettii</i>	0.01
8658		5.51

8659
8660

8661 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
8662 wetland communities. Listing is from State of Florida Wetland Plant List (State of
8663 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
8664 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
8665 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

8666

8667 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8670										
8671	FAC	4(26.7)	1(6.7)						25.4	0.3
8672	FW	4(26.7)	9(60.0)						1.3	25.4
8673	OBL	5(33.3)	2(13.3)						71.6	2.4

8674

8675

8676 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8679										
8680	FAC	2(10.0)							14.5	
8681	FW	7(35.0)	12(40.0)						11.6	64.6
8682	OBL	6(30.0)	3(15.0)						71.1	6.5

8683

8684



Site 18, north of piezometer.



Site 18, east of piezometer.

8685
8686
8687
8688



Site 18, south of piezometer.



Site 18, west of piezometer.

8689
8690
8691
8692
8693

8693 **Site 19.**

8694

8695 Date of Cover Measures: 30 May 1999.

8696

8697 Investigators: Burch

8698

8699 Community Type: Hydric hardwood hammock.

8700

8701 Indicators of Inundation: Within the sample quadrat area, two vascular plant species
8702 noted were Facultative wetland indicator species, and two vascular plant species noted
8703 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
8704 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Three
8705 vascular plant species noted were Facultative wetland indicator species, and one vascular
8706 plant species noted was an Obligate wetland indicator species on the National List of
8707 Plant Species that Occur in Wetlands (Reed 1998).

8708

8709 Vascular Plant Species Encountered (Total = 24)

8710 Plants listed in the State of Florida Hydric Soil Field Indicators and
8711 National List of Plant Species that Occur in Wetlands are indicated,
8712 respectively, beneath each species as appropriate (see below, Vascular
8713 Plant Species Wetland Community Indicators).

8714

8715	<i>Ampelopsis arborea</i>	pepper vine
8716	<i>Blechnum serrulatum</i>	blechnum fern
8717	FACW, FACW+	
8718	<i>Callicarpa americana</i>	beauty berry
8719	<i>Cynanchum scoparium</i>	swallowwort
8720	<i>Dichanthelium</i> sp.	grass
8721	<i>Itea virginica</i>	Virginia willow
8722	OBL, FACW+	
8723	* <i>Oeceoclades maculata</i>	orchid
8724	<i>Parthenocissus quinquefolia</i>	Virginia creeper
8725	--, FAC	
8726	<i>Phlebodium aureum</i>	golden serpent fern
8727	<i>Psychotria nervosa</i>	wild coffee
8728	FAC, --	
8729	<i>Quercus laurifolia</i>	laurel oak
8730	FACW, FACW	
8731	<i>Rapanea punctata</i>	myrsine
8732	FAC, FAC	
8733	<i>Rivina humilis</i>	blood berry
8734	<i>Sabal palmetto</i>	sabal palm
8735	FAC, FAC	
8736	<i>Smilax auriculata</i>	greenbriar
8737	<i>Taxodium distichum</i>	bald cypress
8738	OBL, OBL	
8739	<i>Tillandsia balbisiana</i>	air plant
8740	<i>Tillandsia setacea</i>	air plant
8741	<i>Tillandsia usneoides</i>	air plant
8742	<i>Toxicodendron radicans</i>	poison ivy
8743	--, FAC	

8744	<i>*Urena lobata</i>	Caesar weed
8745	<i>Vitis aestivalis</i>	summer grape
8746	<i>Vitis munsoniana</i>	muscadine grape
8747	--, FAC	
8748	<i>Vittaria lineata</i>	shoestring fern
8749	--, FAC	

8750
8751

8752 Other Representative Plants Near, but Not Within Quadrat

8753		
8754	<i>Persea borbonia</i>	red bay
8755	--, FACW	
8756	<i>Pinus elliottii</i>	slash pine
8757	FACW, FACW	
8758	<i>Psychotria sulzneri</i>	wild coffee
8759	FAC, --	
8760	<i>Sambucus canadensis</i>	elder
8761	FAC, FACW-	
8762	<i>*Schinus terebinthifolius</i>	Brazilian pepper
8763	FAC, FAC	
8764		

8765 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
8766 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
8767 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
8768 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
8769 contribute to the tree or shrub canopy layers.

8770

8771	<u>Species:</u>	<u>Meters Intercepted</u>
------	-----------------	---------------------------

8772

8773	<u>Tree Canopy</u>	<u>Exotics</u>
------	--------------------	----------------

8774	<i>Quercus laurifolia</i>	9.24
8775	<i>Sabal palmetto</i>	1.65
8776	<i>Taxodium distichum</i>	<u>2.84</u>
8777		13.73

8778 Shrubs

8779	<i>Callicarpa americana</i>	0.04
8780	<i>Itea virginica</i>	0.10
8781	<i>Psychotria nervosa</i>	0.11
8782	<i>Rapanea punctata</i>	0.23
8783	<i>Sabal palmetto</i>	<u>3.96</u>
8784		4.44

8785 Epiphytes

8786	<i>Tillandsia setacea</i>	0.13
8787	<i>Tillandsia usneoides</i>	0.03
8788	<i>Vitis aestivalis</i>	0.03
8789	<i>Vitis munsoniana</i>	<u>0.08</u>
8790		0.27

8791 Ground Cover

8792	<i>Ampelopsis arborea</i>	0.04
8793	<i>Blechnum serrulatum</i>	0.58
8794	<i>Cynanchum scoparium</i>	0.06

8795	<i>Dichantheium</i> sp.	0.14
8796	<i>Itea virginica</i>	0.09
8797	<i>Parthenocissus quinquefolia</i>	0.02
8798	<i>Psychotria nervosa</i>	0.09
8799	<i>Rivina humilis</i>	0.14
8800	<i>Sabal palmetto</i>	1.17
8801	<i>Smilax auriculata</i>	0.06
8802	<i>Toxicodendron radicans</i>	<u>0.01</u>
8803		2.40

8804

8805 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 8806 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 8807 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 8808 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 8809 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

8810

8811 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
8815	FAC	4(15.4)	8(30.8)	1.8	1.8	90.4	90.4		35.7	57.5
8816	FW	3(11.5)	5(19.2)	53.0	53.0	5.2	9.6		45.2	53.2
8817	OBL	3(11.5)	2(7.7)	45.1	45.1	4.4			7.9	

8818

8819

8820 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
8824	FAC	3(12.5)	6(25.0)	12.0	12.0	95.9	92.6		52.5	50.0
8825	FW	2(8.3)	3(12.5)	67.3	67.3		2.9		24.2	27.9
8826	OBL	2(8.3)	2(4.2)	20.7	20.7	2.9			3.9	

8827

8828



8829 Site 19, north of piezometer.



8830 Site 19, east of piezometer.

8831

8832



Site 19, south of piezometer.



Site 19, west of piezometer.

8833
8834
8835
8836
8837

8837 **Site 20.**

8838

8839 Date of Cover Measures: 20 March, 1999

8840

8841 Investigators: Burch

8842

8843 Community Type: Cypress slough.

8844

8845 Indicators of Inundation: Within the sample quadrat area, two vascular plant species
8846 noted were Facultative wetland indicator species, and five vascular plant species noted
8847 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
8848 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Six
8849 vascular plant species noted were Facultative wetland indicator species, and three
8850 vascular plant species noted were Obligate wetland indicator species on the National List
8851 of Plant Species that Occur in Wetlands (Reed 1998).

8852

8853 Vascular Plant Species Encountered (Total = 18)

8854 Plants listed in the State of Florida Hydric Soil Field Indicators and
8855 National List of Plant Species that Occur in Wetlands are indicated,
8856 respectively, beneath each species as appropriate (see below, Vascular
8857 Plant Species Wetland Community Indicators).

8858

8859

8860 *Blechnum serrulatum* blechnum fern

8861 FACW, FAC

8862 *Boehmeria cylindrica* false nettle

8863 OBL, FACW+

8864 *Crinum americanum* swamp lily

8865 OBL, OBL

8866 *Ficus aurea* strangler fig

8867 FAC, FACW

8868 *Fraxinus caroliniana* pop ash

8869 OBL, OBL

8870 *Ilex cassine* dahoon holly

8871 OBL, FACW

8872 *Ipomoea indica* morning glory

8873 *Ipomoea tuba* morning glory

8874 *Mikania scandens* hempweed

8875 --, FACW+

8876 *Persea borbonia* red bay

8877 --, FACW

8878 *Psilotum nudum* whisk fern

8879 *Psychotria nervosa* wild coffee

8880 FAC --

8881 *Quercus laurifolia* laurel oak

8882 FACW, FACW

8883 *Rapanea punctata* myrsine

8884	FAC, FAC	
8885	<i>Sabal palmetto</i>	sabal palm
8886	FAC, FAC	
8887	<i>Taxodium distichum</i>	bald cypress
8888	OBL, OBL	
8889	<i>Tillandsia usnioides</i>	Spanish moss
8890	<i>Toxicodendron radicans</i>	poison ivy
8891	--, FAC	

8892

8893 Other Representative Plants Near, but Not Within Quadrat

8894

8895	<i>Campyloneurum phylitidis</i>	strap fern
8896	<i>Cornus foemina</i>	swamp dogwood
8897	FACW, FACW-	
8898	<i>Cynanchum scoparium</i>	--

8899

8900 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
8901 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
8902 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
8903 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
8904 contribute to the tree or shrub canopy layers.

8905

8906

8907 Species: Meters Intercepted

8908

8909 Tree Canopy Exotics

8910	<i>Fraxinus caroliniana</i>	0.98
8911	<i>Ilex cassine</i>	0.29
8912	<i>Persea borbonia</i>	0.35
8913	<i>Quercus laurifolia</i>	5.26
8914	<i>Rapanea punctata</i>	0.79
8915	<i>Sabal palmetto</i>	1.85
8916	<i>Taxodium distichum</i>	<u>9.88</u>
8917		19.40

8918 Shrubs

8919	<i>Fraxinus caroliniana</i>	0.11
8920	<i>Ilex cassine</i>	1.04
8921	<i>Psychotria nervosa</i>	0.62
8922	<i>Sabal palmetto</i>	<u>0.53</u>
8923		2.30

8924 Epiphytes

8925	<i>Toxicodendron radicans</i>	0.14
8926	<i>Mikania scandens</i>	<u>0.03</u>
8927		0.17

8928 Ground Cover

8929	<i>Blechnum serrulatum</i>	5.16
8930	<i>Boehmeria cylindrica</i>	0.34

8931	<i>Crinum americanum</i>	0.13
8932	<i>Psychotria nervosa</i>	0.88
8933	<i>Rapanea punctata</i>	0.12
8934	<i>Sabal palmetto</i>	<u>0.13</u>
8935		6.94

8936
8937

Vascular Plant Species Wetland Community Indicators: 1997

8939

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8943	FAC	4(16.0)	4(16)	13.7	13.2	34.2	21.6	100	2.8	2.5
8944	FW	3(12.0)	6(24.0)	26.1	30.1		62.3		93.4	93.7
8945	OBL	6(24.0)	5(20.0)	57.4	56.7	65.7	3.5		3.4	3.2

8946
8947

Vascular Plant Species Wetland Community Indicators: 1999

8949

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
8953	FAC	4(22.2)	5(27.8)	13.6	13.6	50.0	23.0	82.3	16.3	78.0
8954	FW	2(11.1)	6(33.3)	27.1	30.4		45.2	17.6	74.4	4.9
8955	OBL	5(27.8)	3(16.7)	57.5	52.4	50.0	4.8		6.8	1.9

8956



Site 20, north of piezometer.



Site 20, east of piezometer.

8957
8958
8959
8960



Site 20, south of piezometer.



Site 20, west of piezometer.

8961
8962
8963
8964
8965

8965 **Site 21.**
8966
8967 Date of Cover Measures: 13 March, 1999
8968
8969 Investigators: Burch
8970
8971 Community Type: Disturbed hydric pines. This area burned within the past 3-4 weeks.
8972
8973 Indicators of Inundation: Within the sample quadrat area, three vascular plant species
8974 noted were Facultative wetland indicator species, and one vascular plant species noted
8975 was an Obligate wetland indicator species on the State of Florida Wetland Plant List
8976 (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998).
8977 Five vascular plant species noted were Facultative wetland indicator species on the
8978 National List of Plant Species that Occur in Wetlands (Reed 1998).
8979
8980 Vascular Plant Species Encountered (Total = 22)
8981 Plants listed in the State of Florida Hydric Soil Field Indicators and
8982 National List of Plant Species that Occur in Wetlands are indicated,
8983 respectively, beneath each species as appropriate (see below, Vascular
8984 Plant Species Wetland Community Indicators).
8985
8986 *Andropogon glomeratus* bushybeard bluestem
8987 FACW, FACW+
8988 *Baccharis halimifolia* salt bush
8989 FAC, FAC
8990 *Callicarpa americana* beauty berry
8991 *Cassia* sp. --
8992 *Dichanthelium* sp. grass
8993 *Eupatorium capillifolium* dog fennel
8994 FAC, --
8995 *Eustachys petraea* grass
8996 FAC, --
8997 *Ipomoea sagittata* morning glory
8998 --, FACW
8999 *Iresine diffusa* blood leaf
9000 *Myrica cerifera* wax myrtle
9001 FAC, FAC+
9002 *Panicum* sp. grass
9003 *Paspalum monostachium* gulfcoast paspalum
9004 OBL, FACW
9005 *Physalis viscosa* ground cherry
9006 *Pluchea odorata* fleabane
9007 FACW, FACW
9008 *Ruellia caroliniensis* wild petunia
9009 FAC, --
9010 *Rubus trivialis* dewberry
9011 FAC, FAC
9012 *Ruellia caroliniensis* wild petunia
9013 FAC, --
9014 *Sabal palmetto* sabal palm

9015	FAC, FAC	
9016	<i>Sisyrinchium atlanticum</i>	blue eyed grass
9017	FACW, FACW-	
9018	<i>Solidago</i> sp.	goldenrod
9019	<i>Toxicodendron radicans</i>	poison ivy
9020	--, FAC	
9021	<i>Vitis munsoniana</i>	muscadine grape
9022	--, FAC	

9023

9024 Other Representative Plants Near, but Not Within Quadrat

9025		
9026	<i>Pinus elliotii</i>	slash pine
9027	FACW, FACW	
9028	<i>Schinus terebinthifolius</i>	Brazilian pepper
9029	FAC, FAC	
9030	<i>Taxodium distichum</i>	bald cypress
9031	OBL, OBL	
9032	<i>Quercus virginiana</i>	live oak

9033

9034

9035 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 9036 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 9037 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
 9038 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 9039 contribute to the tree or shrub canopy layers.

9040

9041

9042	<u>Species:</u>	<u>Meters Intercepted</u>
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9043

9044	<u>Tree Canopy</u>	<u>Exotics</u>
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9045

9046	<u>Shrubs</u>	
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9047	<i>Myrica cerifera</i>	0.07
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9048	<i>Sabal palmetto</i>	<u>0.71</u>
------	-----------------------	-------------

9049		0.78
------	--	------

9050	<u>Epiphytes</u>	
------	------------------	--

9051

9052	<u>Ground Cover</u>	
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9053	<i>Andropogon glomeratus</i>	0.13
------	------------------------------	------

9054	<i>Dichanthelium</i> sp.	0.08
------	--------------------------	------

9055	<i>Eustachys petraea</i>	0.03
------	--------------------------	------

9056	<i>Ipomoea sagittata</i>	0.01
------	--------------------------	------

9057	<i>Panicum</i> sp.	0.01
------	--------------------	------

9058	<i>Paspalum monostachium</i>	1.17
------	------------------------------	------

9059	<i>Pluchea odorata</i>	0.01
------	------------------------	------

9060	<i>Ruellia caroliniensis</i>	0.02
------	------------------------------	------

9061	<i>Rubus trivialis</i>	0.03
------	------------------------	------

9062	<i>Solidago</i> sp.	0.01
------	---------------------	------

9063	<i>Toxicodendron radicans</i>	0.43
------	-------------------------------	------

9064	<i>Vitis munsoniana</i>	0.08
------	-------------------------	------

9065 unknown sedge 0.01
 9066 2.02

9067

9068 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 9069 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 9070 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 9071 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 9072 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

9073

9074 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9078	FAC	8(26.7)	11(36.7)	100	100	30.3	30.3		4.3	32.1
9079	FW	3(10.0)	6(26.7)						5.3	64.7
9080	OBL	5(16.7)	3(10.0)						59.4	2.7

9081

9082

9083 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9087	FAC	8(36.4)	6(27.3)		100	100			3.9	26.6
9088	FW	3(13.6)	5(22.7)						6.9	65.0
9089	OBL	1(4.5)							57.6	

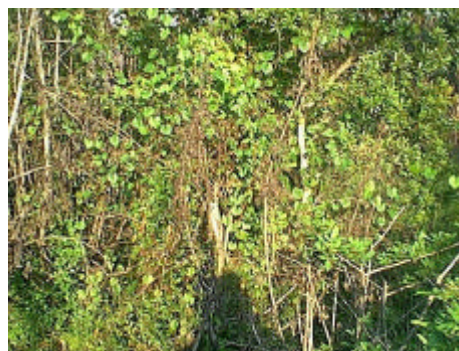
9090

9091

9092



9093 Site 21, north of piezometer.



9094 Site 21, east of piezometer.

9095

9096



Site 21, south of piezometer.



Site 21, west of piezometer.

9097
9098
9099
9100
9101

9101 **Site 22.**
9102
9103 Date of Cover Measures: 13 March, 1999
9104
9105 Investigators: Burch
9106
9107 Community Type: Prairie with hydric pines.
9108
9109 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
9110 were Facultative wetland indicator species, and three vascular plant species noted were
9111 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
9112 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine
9113 vascular plant species noted were Facultative wetland indicator species, and one vascular
9114 plant species noted was an Obligate wetland indicator species on the National List of
9115 Plant Species that Occur in Wetlands (Reed 1998).
9116
9117
9118 Vascular Plant Species Encountered (Total =20)
9119 Plants listed in the State of Florida Hydric Soil Field Indicators and
9120 National List of Plant Species that Occur in Wetlands are indicated,
9121 respectively, beneath each species as appropriate.
9122
9123 *Andropogon glomeratus* bushybeard bluestem
9124 FACW, FACW+
9125 *Baccharis halimifolia* salt bush
9126 FAC, FAC
9127 *Blechnum serrulatum* blechnum fern
9128 FACW, FACW+
9129 *Centella asiatica* spadeleaf
9130 FACW, FACW
9131 *Cirsium horridulum* thistle
9132 -- , FAC+
9133 *Cladium jamaicense* saw grass
9134 OBL, OBL
9135 *Dichanthelium* sp. grass
9136 *Eupatorium capillifolium* dog fennel
9137 FAC, --
9138 *Ipomoea sagittata* morning glory
9139 --, FACW
9140 *Iresine diffusa* blood leaf
9141 *Mikania scandens* hempweed
9142 --, FACW+
9143 *Muhlenbergia capillaris* muhly grass
9144 OBL, FACU
9145 *Paspalum monostachium* gulfcoast paspalum
9146 OBL, FACW
9147 *Physalis viscosa* ground cherry
9148 *Pinus elliotii* slash pine
9149 FACW, FACW

9150	<i>Pluchea odorata</i>	fleabane
9151	FACW, FACW	
9152	<i>Sabal palmetto</i>	sabal palm
9153	FAC, FAC	
9154	<i>Schinus terebinthifolius</i>	Brazilian pepper
9155	FAC, FAC	
9156	<i>Teucrium canadense</i>	germander
9157	FACW, FACW-	
9158	<i>Toxicodendron radicans</i>	poison ivy
9159	--, FAC	

9160
9161

Other Representative Plants Near, but Not Within Quadrat

9163		
9164	<i>Centella asiatica</i>	spadeleaf
9165	FACW, FACW	
9166	<i>Hyptis alata</i>	bush mint
9167	FACW, OBL	
9168	<i>Lantana camara</i>	lantana
9169	<i>Myrica cerifera</i>	wax myrtle
9170	FAC, FAC+	
9171	<i>Ruellia caroliniensis</i>	wild petunia
9172	FAC, --	
9173	<i>Urena lobata</i>	Caesar weed

9174

Cover Measures: Meters of transect line intercepts of vascular plant species within 10m X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting four randomly selected 10m transects within the sample quadrat. Epiphytes includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but contribute to the tree or shrub canopy layers.

9180

9181

9182	<u>Species:</u>	<u>Meters Intercepted</u>
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9183

9184	<u>Tree Canopy</u>	<u>Exotics</u>
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9185	<i>Pinus elliottii</i>	<u>5.04</u>
------	------------------------	-------------

9186		5.04
------	--	------

9187	<u>Shrubs</u>
------	---------------

9188	<i>Sabal palmetto</i>	0.22
------	-----------------------	------

9189	<i>Schinus terebinthifolius</i>	<u>0.06</u>	<u>0.06</u>
------	---------------------------------	-------------	-------------

9190		0.28	0.06
------	--	------	------

9191	<u>Epiphytes</u>
------	------------------

9192

9193	<u>Ground Cover</u>
------	---------------------

9194	<i>Andropogon glomeratus</i>	0.32
------	------------------------------	------

9195	<i>Cladium jamaicense</i>	0.01
------	---------------------------	------

9196	<i>Eupatorium capillifolium</i>	0.03
------	---------------------------------	------

9197	<i>Ipomoea sagittata</i>	0.28
------	--------------------------	------

9198	<i>Paspalum monostachium</i>	0.23
------	------------------------------	------

9199	<i>Physalis viscosa</i>	0.26
9200	<i>Pluchea odorata</i>	0.12
9201	<i>Teucrium canadense</i>	0.03
9202		1.28

9203

9204 Vascular Plant Species Wetland Community Indicators: 1997

9205

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9209	FAC	8(23.5)	13(38.2)		100	100		100	0.8	0.1
9210	FW	6(17.6)	8(23.5)	100	100				0.7	96.8
9211	OBL	6(17.6)	5(14.7)						96.0	0.4

9212

9213

9214 Vascular Plant Species Wetland Community Indicators: 1999

9215

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9219	FAC	4(20.0)	5(25.0)		100	100			2.3	
9220	FW	6(30.0)	9(45.0)	100	100				36.7	51.6
9221	OBL	3(15.0)	1(5.0)						18.8	0.8

9222



9223 Site 22, north of piezometer.



9224 Site 22, east of piezometer.

9225

9226



9227 Site 22, south of piezometer.



9228 Site 22, west of piezometer.

9229
9230
9231

9231 **Site 23.**
 9232
 9233 Date of Cover Measures: 13 March, 1999
 9234
 9235 Investigators: Burch
 9236
 9237 Community Type: Disturbed (dehydrated) slough; community has burned within the past
 9238 3-4 weeks.
 9239
 9240 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
 9241 were Facultative wetland indicator species, and three vascular plant species noted were
 9242 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
 9243 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Seven
 9244 vascular plant species noted were Facultative wetland indicator species, and two vascular
 9245 plant species noted were Obligate wetland indicator species on the National List of Plant
 9246 Species that Occur in Wetlands (Reed 1998).
 9247
 9248
 9249 Vascular Plant Species Encountered (Total = 21)
 9250 Plants listed in the State of Florida Hydric Soil Field Indicators and
 9251 National List of Plant Species that Occur in Wetlands are indicated,
 9252 respectively, beneath each species as appropriate.
 9253
 9254 *Acer rubrum* red maple
 9255 FACW, FAC
 9256 *Baccharis halimifolia* salt bush
 9257 FAC, FAC
 9258 *Blechnum serrulatum* blechnum fern
 9259 FACW, FACW+
 9260 *Boehmeria cylindrica* false nettle
 9261 OBL, FACW+
 9262 *Cornus foemina* Florida dogwood
 9263 FACW, FACW-
 9264 *Cynanchum scoparium* --
 9265 *Dichanthelium* sp. grass
 9266 *Fraxinus caroliniana* pop ash
 9267 OBL, OBL
 9268 *Hypericum mutilum* --
 9269 FACW, FACW
 9270 *Parthenocissus quinquefolia* Virginia creeper
 9271 --, FAC
 9272 *Pluchea odorata* fleabane
 9273 FACW, FACW
 9274 *Psychotria nervosa* wild coffee
 9275 FAC, --
 9276 *Psychotria sulzneri* wild coffee
 9277 FAC, --
 9278 *Quercus laurifolia* laurel oak
 9279 FACW, FACW
 9280 *Sabal palmetto* sabal palm

9281	FAC, FAC	
9282	<i>Sambucus canadensis</i>	elder
9283	FAC, FACW-	
9284	* <i>Schinus terebinthifolius</i>	Brazilian pepper
9285	FAC, FAC	
9286	<i>Taxodium distichum</i>	bald cypress
9287	OBL, OBL	
9288	<i>Toxicodendron radicans</i>	poison ivy
9289	--, FAC	
9290	<i>Vitis aestivalis</i>	summer grape
9291	<i>Vitis munsoniana</i>	muscadine grape
9292	--, FAC	
9293		

9294 Other Representative Plants Near, but Not Within Quadrat

9295
9296 None noted.

9297
9298 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
9299 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
9300 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
9301 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
9302 contribute to the tree or shrub canopy layers.

9303
9304
9305 Species: Meters Intercepted

9306		
9307	<u>Tree Canopy</u>	<u>Exotics</u>
9308	<i>Acer rubrum</i>	0.28
9309	<i>Cornus foemina</i>	2.30
9310	<i>Quercus laurifolia</i>	0.06
9311	<i>Sabal palmetto</i>	1.59
9312	<i>Schinus terebinthifolius</i>	1.21 1.21
9313	<i>Taxodium distichum</i>	0.95
9314		6.39 1.21
9315	<u>Shrubs</u>	
9316	<i>Baccharis halimifolia</i>	0.03
9317	<i>Cornus foemina</i>	0.17
9318	<i>Fraxinus caroliniana</i>	0.11
9319	<i>Sambucus canadensis</i>	0.09
9320		0.40
9321	<u>Epiphytes</u>	
9322	<i>Vitis aestivalis</i>	0.28
9323	<i>Vitis munsoniana</i>	0.34
9324		0.62
9325	<u>Ground Cover</u>	
9326	<i>Baccharis halimifolia</i>	0.06
9327	<i>Blechnum serrulatum</i>	0.41
9328	<i>Boehmeria cylindrica</i>	0.06
9329	<i>Cornus foemina</i>	0.09
9330	<i>Dichanthelium</i> sp.	0.01

9331	<i>Parthenocissus quinquefolia</i>	0.23	
9332	<i>Psychotria nervosa</i>	0.03	
9333	<i>Schinus terebinthifolius</i>	0.05	0.05
9334	<i>Toxicodendron radicans</i>	<u>0.31</u>	
9335		1.25	0.05

9336

9337 Vascular Plant Species Wetland Community Indicators: 1997

9338

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9340										
9341										
9342	FAC	5(20.8) 10(41.7)	52.9	57.0	84.3	84.3		100	3.3	39.3
9343	FW	6(25.0) 7(29.2)	16.8	18.3	13.5	1.5			21.8	31.2
9344	OBL	4(16.7) 3(12.5)	12.6	12.6					35.0	24.4

9345

9346

9347 Vascular Plant Species Wetland Community Indicators: 1999

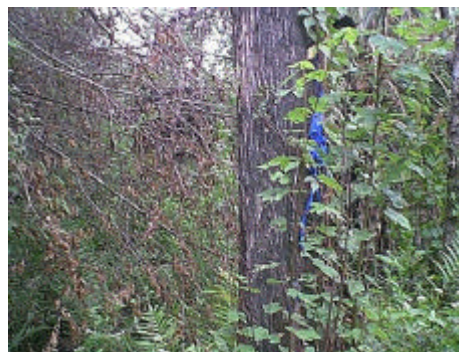
9348

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9350										
9351										
9352	FAC	6(28.6) 7(33.3)	43.8	48.2	30.0	7.5		54.8	11.2	52.0
9353	FW	6(28.6) 7(33.3)	41.3	36.9	42.5	65.0			40.0	44.8
9354	OBL	3(14.3) 2(9.5)	14.9	14.9	27.5	27.5			4.8	

9355



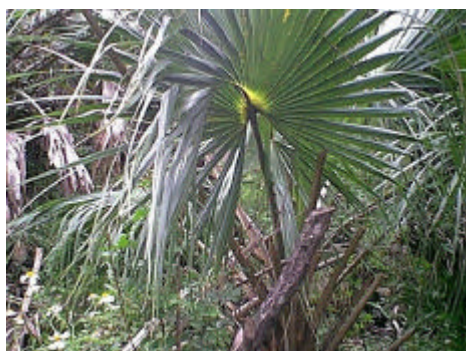
9356 Site 23, north of piezometer.



9357 Site 23, east of piezometer.

9358

9359



9360

9361 Site 23, south of piezometer.
9362
9363
9364

Site 23, west of piezometer.

9414	<i>Sambucus canadensis</i>	elder
9415	FAC, FACW-	
9416	<i>Schinus terebinthifolius</i>	Brazilian pepper
9417	FAC, FAC	
9418	<i>Smilax auriculata</i>	greenbriar
9419	<i>Taxodium distichum</i>	bald cypress
9420	OBL, OBL	
9421	<i>Tillandsia fasciculata</i>	air plant
9422	<i>Tillandsia setacea</i>	air plant
9423	<i>Tillandsia usneoides</i>	air plant
9424	<i>Toxicodendron radicans</i>	poison ivy
9425	--, FAC	
9426	<i>Vitis aestivalis</i>	summer grape
9427	<i>Vitis munsoniana</i>	muscadine grape
9428	--, FAC	
9429	<i>Vittaria lineata</i>	shoestring fern
9430	--, FAC	

Other Representative Plants Near, but Not Within Quadrat

9432		
9433	<i>Acer rubrum</i>	red maple
9434	FACW, FAC	
9435	<i>Ampelopsis arborea</i>	pepper vine
9436	<i>Fraxinus caroliniana</i>	pop ash
9437	OBL, OBL	
9438	<i>Iresine diffusa</i>	blood leaf
9439	<i>Quercus laurifolia</i>	laurel oak
9440	FACW, FACW	
9441	<i>Rapanea punctata</i>	myrsine
9442	FAC, FAC	
9443	<i>Tillandsia balbisiana</i>	air plant
9444		

Cover Measures: Meters of transect line intercepts of vascular plant species within 10m X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting four randomly selected 10m transects within the sample quadrat. Epiphytes includes true epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but contribute to the tree or shrub canopy layers.

9450			
9451			
9452	<u>Species:</u>	<u>Meters Intercepted</u>	
9453			
9454	<u>Tree Canopy</u>		<u>Exotics</u>
9455	<i>Cornus foemina</i>	3.08	
9456	<i>Sabal palmetto</i>	2.21	
9457	<i>Schinus terebinthifolius</i>	6.58	6.58
9458	<i>Taxodium distichum</i>	<u>1.37</u>	
9459		13.24	<u>6.58</u>
9460	<u>Shrubs</u>		
9461	<i>Baccharis halimifolia</i>	0.10	
9462	<i>Cornus foemina</i>	0.31	
9463	<i>Schinus terebinthifolius</i>	<u>0.50</u>	<u>0.50</u>
9464		0.91	0.50

9465	<u>Epiphytes</u>		
9466	<i>Ipomoea indica</i>	0.01	
9467	<i>Parthenocissus quinquefolia</i>	0.06	
9468	<i>Toxicodendron radicans</i>	0.78	
9469	<i>Vitis aestivalis</i>	<u>0.43</u>	
9470		1.28	
9471	<u>Ground Cover</u>		
9472	<i>Blechnum serrulatum</i>	1.19	
9473	<i>Boehmeria cylindrica</i>	0.11	
9474	<i>Cornus foemina</i>	0.04	
9475	<i>Dichanthelium</i> sp.	0.08	
9476	<i>Oplismenus setarius</i>	0.16	
9477	<i>Parthenocissus quinquefolia</i>	0.06	
9478	<i>Psychotria nervosa</i>	0.10	
9479	<i>Sambucus canadensis</i>	0.21	
9480	<i>Schinus terebinthifolius</i>	0.24	0.24
9481	<i>Smilax auriculata</i>	0.03	
9482	<i>Toxicodendron radicans</i>	1.14	
9483	<i>Vitis aestivalis</i>	0.05	
9484	<i>Vitis munsoniana</i>	<u>0.03</u>	
9485		3.31	<u>0.24</u>
9486			
9487			

Vascular Plant Species Wetland Community Indicators: 1997

9488											
9489											
9490		<u>Number of</u>				<u>Percent Cover</u>					
9491		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
9492		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9493	FAC	7(21.9)	10(31.3)	54.4	46.3	59.3	59.3		94.1	2.0	46.5
9494	FW	4(12.5)	7(21.9)	22.1	11.1	6.8				43.9	52.4
9495	OBL	3(9.4)	2(6.3)	20.5	20.5					7.0	
9496											
9497											

Vascular Plant Species Wetland Community Indicators: 1999

9498											
9499											
9500		<u>Number of</u>				<u>Percent Cover</u>					
9501		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
9502		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9503	FAC	7(25.9)	8(29.6)	66.4	66.4	65.9	65.9		66.4	18.4	44.4
9504	FW	2(7.4)	6(22.2)	23.3	23.3	34.1	34.1			37.2	48.8
9505	OBL	7(7.4)	1(3.7)	10.3	10.3					30.2	
9506											



Site 24, north of piezometer.



Site 24, east of piezometer.



Site 24, south of piezometer.



Site 24, west of piezometer.

9515 **Site 25.**
9516
9517 Date of Cover Measures: 20 March, 1999.
9518
9519 Investigators: Burch
9520
9521 Community Type: Disturbed oak and sabal palm hammock.
9522
9523 Indicators of Inundation: Within the sample quadrat area, four vascular plant species
9524 noted were Facultative wetland indicator species on the State of Florida Wetland Plant
9525 List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al.
9526 1998). Seven vascular plant species noted were Facultative wetland indicator species
9527 noted were Obligate wetland indicator species on the National List of Plant Species that
9528 Occur in Wetlands (Reed 1998).
9529
9530 Vascular Plant Species Encountered (Total = 26)
9531 Plants listed in the State of Florida Hydric Soil Field Indicators and
9532 National List of Plant Species that Occur in Wetlands are indicated,
9533 respectively, beneath each species as appropriate.
9534
9535 *Ampelopsis arborea* pepper vine
9536 *Andropogon virginicus* bluestem
9537 FAC, FAC-
9538 *Baccharis halimifolia* salt bush
9539 FAC, FAC
9540 *Berchemia scandens* rattan vine
9541 --, FAC-
9542 *Blechnum serrulatum* blechnum fern
9543 FACW, FACW+
9544 *Cirsium horridulum* thistle
9545 -- , FAC+
9546 *Cornus foemina* Florida dogwood
9547 FACW, FACW-
9548 *Cynanchum scoparium* swallowwort
9549 *Dichanthelium* sp. grass
9550 *Dichromena colorata* white-top sedge
9551 FACW, FACW
9552 *Erianthus giganteus* plumegrass
9553 OBL, FACW
9554 *Eupatorium capillifolium* dog fennel
9555 FAC, --
9556 *Mikania cordifolia* hempweed
9557 --, FACW
9558 *Mikania scandens* hempweed
9559 --, FACW+
9560 *Parthenocissus quinquefolia* Virginia creeper
9561 --, FAC
9562 *Quercus laurifolia* laurel oak
9563 FACW, FACW
9564 *Rubus trivialis* dewberry

9565	FAC, FAC	
9566	<i>Sabal palmetto</i>	sabal palm
9567	FAC, FAC	
9568	<i>Sambucus canadensis</i>	elder
9569	FAC, FACW-	
9570	* <i>Schinus terebinthifolius</i>	Brazilian pepper
9571	FAC, FAC	
9572	<i>Smilax auriculata</i>	greenbriar
9573	<i>Solidago</i> sp.	goldenrod
9574	<i>Toxicodendron radicans</i>	poison ivy
9575	--, FAC	
9576	<i>Urena lobata</i>	Caesar weed
9577	<i>Vitis aestivalis</i>	summer grape
9578	<i>Vitis munsoniana</i>	muscadine grape
9579	--, FAC	

9580

9581 Other Representative Plants Near, but Not Within Quadrat

9582		
9583	<i>Boehmeria cylindrica</i>	false nettle
9584	OBL, FACW+	
9585	<i>Ambrosia artemesiifolia</i>	ragweed
9586	<i>Fraxinus caroliniana</i>	pop ash
9587	OBL, OBL	
9588	<i>Hyptis alata</i>	bush mint
9589	FACW, OBL	
9590	<i>Tillandsia usneoides</i>	air plant
9591	<i>Vittaria lineata</i>	shoestring fern
9592	--, FAC	

9593

9594 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 9595 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 9596 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
 9597 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 9598 contribute to the tree or shrub canopy layers.

9599

9600 Species: Meters Intercepted

9601

9602	<u>Tree Canopy</u>	<u>Exotics</u>
9603	<i>Baccharis halimifolia</i>	0.12
9604	<i>Cornus foemina</i>	3.01
9605	<i>Quercus laurifolia</i>	2.00
9606	<i>Sabal palmetto</i>	3.01
9607	<i>Schinus terebinthifolius</i>	<u>0.88</u> <u>0.88</u>
9608		9.02 0.88

9609

9610	<u>Shrubs</u>	
9610	<i>Baccharis halimifolia</i>	0.09
9611	<i>Quercus laurifolia</i>	0.39
9612	<i>Sabal palmetto</i>	0.85
9613	<i>Schinus terebinthifolius</i>	<u>0.34</u> <u>0.34</u>
9614		1.67 0.34

9615

9616	<u>Epiphytes</u>	
9617	<i>Ampelopsis arborea</i>	1.29
9618	<i>Smilax auriculata</i>	0.03
9619	<i>Toxicodendron radicans</i>	0.29
9620	<i>Vitis aestivalis</i>	<u>0.16</u>
9621		1.77
9622	<u>Ground Cover</u>	
9623	<i>Ampelopsis arborea</i>	1.00
9624	<i>Andropogon virginicus</i>	0.09
9625	<i>Berchemia scandens</i>	0.04
9626	<i>Blechnum serrulatum</i>	0.19
9627	<i>Cynanchum scoparium</i>	0.01
9628	<i>Dichanthelium</i> sp.	0.57
9629	<i>Eupatorium capillifolium</i>	0.18
9630	<i>Mikania scandens</i>	0.02
9631	<i>Rubus trivialis</i>	0.17
9632	<i>Sambucus canadensis</i>	0.23
9633	<i>Smilax auriculata</i>	0.06
9634	<i>Toxicodendron radicans</i>	1.26
9635	<i>Urena lobata</i>	0.10
9636	<i>Vitis munsoniana</i>	<u>0.08</u>
9637		4.00
9638		
9639		

9640 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 9641 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 9642 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 9643 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 9644 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

9645
 9646 1997

9647											
9648		<u>Number of</u>		<u>Percent Cover</u>							
9649		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
9650		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9651	FAC	8(19.5)	14(34.1)	28.7	28.7	76.1	76.1		94.6	8.7	41.3
9652	FW	4(9.6)	10(24.4)	71.3	25.6	23.9	4.1			3.0	7.0
9653	OBL	4(9.6)	1(2.4)							1.0	

9654
 9655 1999

9656											
9657		<u>Number of</u>		<u>Percent Cover</u>							
9658		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
9659		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9660	FAC	7(26.9)	10(38.5)	44.5	44.5	76.6	76.6		16.7	16.8	43.0
9661	FW	4(15.4)	7(26.9)	55.5	55.5	23.4	23.4			4.8	11.0
9662	OBL										
9663											



Site 25, north of piezometer.



Site 25, east of piezometer.



Site 25, south of piezometer.



Site 25, west of piezometer.

9672 **Site 26.**
 9673
 9674 Date of Cover Measures: 8 May, 1999
 9675
 9676 Investigators: Burch
 9677
 9678 Community Type: Transitional prairie, pine flatwoods, and hydric pine flatwoods.
 9679
 9680 Indicators of Inundation: Within the sample quadrat area, eight vascular plant species
 9681 noted were Facultative wetland indicator species, and four vascular plant species noted
 9682 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
 9683 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine
 9684 vascular plant species noted were Facultative wetland indicator species, and three
 9685 vascular plant species noted were Obligate wetland indicator species on the National List
 9686 of Plant Species that Occur in Wetlands (Reed 1998).
 9687
 9688 Vascular Plant Species Encountered (Total = 33)
 9689 Plants listed in the State of Florida Hydric Soil Field Indicators and
 9690 National List of Plant Species that Occur in Wetlands are indicated,
 9691 respectively, beneath each species as appropriate.
 9692
 9693 *Andropogon virginicus* bluestem
 9694 FAC, FAC-
 9695 *Aster dumosus* aster
 9696 FAC, FAC
 9697 *Baccharis halimifolia* salt bush
 9698 FAC, FAC
 9699 *Bumelia celastrina* buckthorn
 9700 FAC, --
 9701 *Callicarpa americana* beauty berry
 9702 *Cirsium horridulum* thistle
 9703 -- , FAC+
 9704 *Cladium jamaicense* saw grass
 9705 OBL, OBL
 9706 *Coreopsis leavenworthii* tickseed
 9707 FACW, FACW
 9708 *Dichanthelium* sp. grass
 9709 *Eryngium balduinii* snakeroot
 9710 FAC, FACW+
 9711 *Eupatorium leptophyllum* false fennel
 9712 OBL, FAC
 9713 *Eupatorium mikanioides* semaphore eupatorium
 9714 FACW, FACW
 9715 *Eustachys glauca* grass
 9716 FACW, FACW
 9717 *Flaveria linearis* yellowtop
 9718 FACW, FACW
 9719 *Galactea regularis* milk pea
 9720 *Hypericum fasciculatum* sandweed

9721	FACW, FACW	
9722	<i>Hyptis alata</i>	bush mint
9723	FACW, OBL	
9724	<i>Ipomoea sagittata</i>	morning glory
9725	--, FACW	
9726	<i>Lobelia glandulosa</i>	--
9727	FACW, OBL	
9728	* <i>Melochia corchorifolia</i>	chocolate weed
9729	FAC, FAC	
9730	<i>Melothria pendula</i>	creeping cucumber
9731	<i>Muhlenbergia capillaris</i>	muhly grass
9732	OBL, FACU	
9733	<i>Paspalum ciliatifolium</i>	grass
9734	<i>Paspalum monostachium</i>	gulfcoast paspalum
9735	OBL, FACW	
9736	<i>Pluchea odorata</i>	fleabane
9737	FACW, FACW	
9738	<i>Polygala grandiflora</i>	candyroot
9739	FACW, --	
9740	<i>Rhus copallina</i>	sumac
9741	<i>Rubus trivialis</i>	dewberry
9742	FAC, FAC	
9743	<i>Sabal palmetto</i>	sabal palm
9744	FAC, FAC	
9745	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
9746	FAC, FACW-	
9747	<i>Serenoa repens</i>	saw palmetto
9748	<i>Setaria geniculata</i>	knotroot bristlegrass
9749	FAC, FAC	
9750	<i>Vitis munsoniana</i>	muscadine grape
9751	--, FAC	
9752		
9753		
9754	<u>Other Representative Plants Near, but Not Within Quadrat</u>	
9755		
9756	<i>Berchemia scandens</i>	rattan vine
9757	--, FAC-	
9758	<i>Blechnum serrulatum</i>	blechnum fern
9759	FACW, FACW+	
9760	<i>Chiococca parviflora</i>	snowberry
9761	FAC, --	
9762	<i>Erianthus giganteus</i>	plumegrass
9763	OBL, FACW	
9764	<i>Eryngium yuccifolium</i>	rattlesnake master
9765	FAC, FAC	
9766	<i>Kosteletzkya virginica</i>	saltmarsh mallow
9767	OBL, OBL	
9768	<i>Myrica cerifera</i>	wax myrtle
9769	FAC, FAC+	
9770	<i>Persea borbonia</i>	red bay
9771	--, FACW	
9772	<i>Pteridium aquilinum</i>	bracken fern

9773	<i>Smilax auriculata</i>	greenbriar
9774	<i>Toxicodendron radicans</i>	poison ivy
9775	--, FAC	
9776		
9777	<u>Cover Measures:</u> Meters of transect line intercepts of vascular plant species within 10m	
9778	X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting	
9779	four randomly selected 10m transects within the sample quadrat. <u>Epiphytes</u> includes true	
9780	epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but	
9781	contribute to the tree or shrub canopy layers.	
9782		
9783	<u>Species:</u>	<u>Meters Intercepted</u>
9784		
9785	<u>Tree Canopy</u>	<u>Exotics</u>
9786	<i>Pinus elliottii</i>	1.47
9787	<i>Taxodium distichum</i>	<u>0.23</u>
9788		1.70
9789	<u>Shrubs</u>	
9790		
9791	<u>Epiphytes</u>	
9792		
9793	<u>Ground Cover</u>	
9794	<i>Andropogon virginicus</i>	1.20
9795	<i>Cladium jamaicense</i>	0.14
9796	<i>Coreopsis leavenworthii</i>	0.03
9797	<i>Dichanthelium</i> sp.	0.18
9798	<i>Eryngium balduinii</i>	0.48
9799	<i>Eupatorium leptophyllum</i>	0.02
9800	<i>Eupatorium mikanioides</i>	0.02
9801	<i>Eustachys glauca</i>	0.20
9802	<i>Flaveria linearis</i>	0.02
9803	<i>Galactea regularis</i>	0.01
9804	<i>Hypericum fasciculatum</i>	0.01
9805	<i>Hyptis alata</i>	0.50
9806	<i>Lobelia glandulosa</i>	0.01
9807	<i>Melochia corchorifolia</i>	0.14 0.14
9808	<i>Melothria pendula</i>	0.01
9809	<i>Muhlenbergia capillaris</i>	0.17
9810	<i>Paspalum ciliatifolium</i>	0.11
9811	<i>Paspalum monostachium</i>	1.74
9812	<i>Pluchea odorata</i>	0.30
9813	<i>Rubus trivialis</i>	0.04
9814	<i>Sabal palmetto</i>	0.01
9815	<i>Schizachyrium rhizomatum</i>	1.57
9816	<i>Vitis munsoniana</i>	<u>0.04</u>
9817		6.95 0.14
9818		
9819		
9820	<u>Vascular Plant Species Wetland Community Indicators:</u> Vascular plants that indicate	
9821	wetland communities. Listing is from State of Florida Wetland Plant List (State of	
9822	Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and	

9823 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 9824 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

9825
 9826 1997

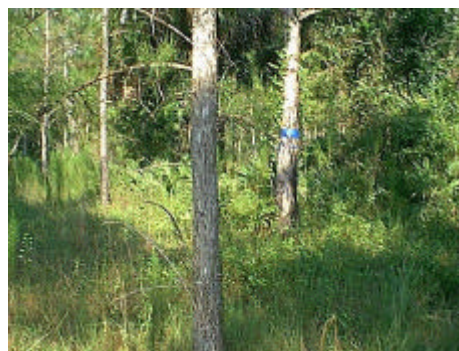
		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9831	FAC	7(20.0)	6(17.1)			28.9	13.1			12.5	2.3
9832	FW	12(34.3)	15(42.9)	52.6	52.6	9.7	9.7			11.3	36.5
9833	OBL	5(14.3)	5(14.3)	47.4	47.4					42.7	5.4

9834
 9835 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9840	FAC	10(30.3)	10(30.3)							49.5	20.9
9841	FW	8(24.2)	9(27.3)	86.5	86.5					15.7	62.9
9842	OBL	4(12.1)	3(9.1)	13.5	13.5					34.1	9.4



9844
 9845 Site 26, north of piezometer.



Site 26, east of piezometer.

9846
 9847



9848
 9849 Site 26, south of piezometer.



Site 26, west of piezometer.

9850
 9851
 9852

9852 **Site 27.**
9853
9854 Date of Cover Measures: 8 May, 1999
9855
9856 Investigators: Burch
9857
9858 Community Type: Disturbed slough and prairie ecotone.
9859
9860 Indicators of Inundation: Within the sample quadrat area, eight vascular plant species
9861 noted were Facultative wetland indicator species, and two vascular plant species noted
9862 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
9863 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Seven
9864 vascular plant species noted were Facultative wetland indicator species, and two vascular
9865 plant species noted were Obligate wetland indicator species on the National List of Plant
9866 Species that Occur in Wetlands (Reed 1998).
9867
9868 Vascular Plant Species Encountered (Total = 29)
9869 Plants listed in the State of Florida Hydric Soil Field Indicators and
9870 National List of Plant Species that Occur in Wetlands are indicated,
9871 respectively, beneath each species as appropriate.
9872
9873 *Ampelopsis arborea* pepper vine
9874 *Andropogon virginicus* bluestem
9875 FAC, FAC-
9876 *Aster dumosus* aster
9877 FAC, FAC
9878 *Blechnum serrulatum* blechnum fern
9879 FACW, FACW+
9880 *Bumelia celastrina* buckthorn
9881 FAC, --
9882 *Cirsium horridulum* thistle
9883 -- , FAC+
9884 *Cladium jamaicense* saw grass
9885 OBL, OBL
9886 *Coreopsis leavenworthii* tickseed
9887 FACW, FACW
9888 *Cyperus* sp. sedge
9889 FACW, --
9890 *Dichanthelium* sp. grass
9891 *Erianthus giganteus* plumegrass
9892 OBL, FACW
9893 *Eupatorium mikanioides* semaphore eupatorium
9894 FACW, FACW
9895 *Eustachys glauca* grass
9896 FACW, FACW
9897 *Hypericum mutilum* --
9898 FACW, FACW
9899 *Iresine diffusa* blood leaf
9900 *Lippia nodiflora carpetweed
9901 *Melochia corchorifolia chocolate weed

9902	FAC, FAC	
9903	<i>Myrica cerifera</i>	wax myrtle
9904	FAC, FAC+	
9905	<i>Parthenocissus quinquefolia</i>	Virginia creeper
9906	--, FAC	
9907	<i>Phlebodium aureum</i>	golden serpent fern
9908	<i>Pluchea odorata</i>	fleabane
9909	FACW, FACW	
9910	<i>Rubus trivialis</i>	dewberry
9911	FAC, FAC	
9912	<i>Sabal palmetto</i>	sabal palm
9913	FAC, FAC	
9914	* <i>Schinus terebinthifolius</i>	Brazilian pepper
9915	FAC, FAC	
9916	<i>Smilax auriculata</i>	greenbriar
9917	<i>Solidago stricta</i>	goldenrod
9918	FACW, OBL	
9919	<i>Toxicodendron radicans</i>	poison ivy
9920	--, FAC	
9921	<i>Urena lobata</i>	Caesar weed
9922	<i>Vitis munsoniana</i>	muscadine grape
9923	--, FAC	

9924 Other Representative Plants Near, but Not Within Quadrat

9925		
9926		
9927	<i>Dichromena colorata</i>	white_top sedge
9928	FACW, FACW	
9929	<i>Euthamia minor</i>	--
9930	FAC, FAC	
9931	<i>Mikania scandens</i>	hempweed
9932	--, FACW+	
9933	<i>Persea borbonia</i>	red bay
9934	--, FACW	
9935	<i>Physalis viscosa</i>	ground cherry
9936		

9937 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
9938 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
9939 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
9940 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
9941 contribute to the tree or shrub canopy layers.

9942			
9943	<u>Species:</u>	<u>Meters Intercepted</u>	
9944			
9945	<u>Tree Canopy</u>		<u>Exotics</u>
9946	<i>Sabal palmetto</i>	<u>5.01</u>	
9947		5.01	
9948	<u>Shrubs</u>		
9949	<i>Myrica cerifera</i>	0.11	
9950	<i>Sabal palmetto</i>	3.28	
9951	<i>Schinus terebinthifolius</i>	<u>0.40</u>	<u>0.40</u>
9952		0.40	0.40

9953		
9954	<u>Epiphytes</u>	
9955	<i>Vitis munsoniana</i>	0.30
9956		0.30
9957		
9958	<u>Ground Cover</u>	
9959	<i>Ampelopsis arborea</i>	0.37
9960	<i>Andropogon virginicus</i>	0.49
9961	<i>Aster dumosus</i>	0.03
9962	<i>Blechnum serrulatum</i>	0.05
9963	<i>Cirsium horridulum</i>	0.06
9964	<i>Cladium jamaicense</i>	0.04
9965	<i>Cyperus</i> sp.	0.21
9966	<i>Dichanthelium</i> sp.	0.04
9967	<i>Erianthus giganteus</i>	0.08
9968	<i>Eupatorium mikanioides</i>	0.04
9969	<i>Hypericum mutilum</i>	0.06
9970	<i>Parthenocissus quinquefolia</i>	0.05
9971	<i>Pluchea odorata</i>	0.01
9972	<i>Rubus trivialis</i>	0.04
9973	<i>Smilax auriculata</i>	0.13
9974	<i>Toxicodendron radicans</i>	2.84
9975	<i>Vitis munsoniana</i>	1.70
9976	unk. grass	0.25
9977		6.87

9978

9979

9980 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate

9981 wetland communities. Listing is from State of Florida Wetland Plant List (State of

9982 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and

9983 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;

9984 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

9985

9986 1997

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9990											
9991	FAC	10(19.6)	18(35.3)	100	100	100	100		100	13.2	56.7
9992	FW	10(19.6)	14(25.5)							16.1	17.2
9993	OBL	4(7.8)	2(3.9)							3.7	2.9

9994

9995 1999

		<u>Number of</u>		<u>Percent Cover</u>							
		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
9997											
9998											
9999											
10000	FAC	8(27.6)	10(34.5)	100	100	100	100		100	8.2	75.8
10001	FW	8(27.6)	7(24.1)							7.3	3.5

10002	OBL	2(6.9)	2(6.9)	1.7	2.0
10003					
10004					



Site 27, north of piezometer.

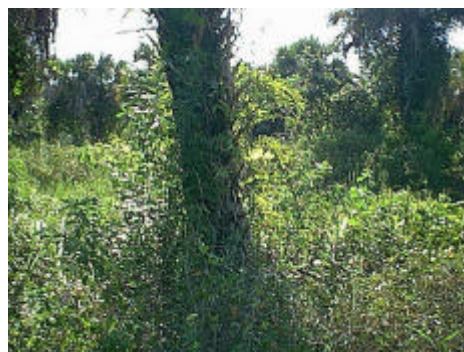


Site 27, east of piezometer.

10005
10006
10007
10008



Site 27, south of piezometer.



Site 27, west of piezometer.

10009
10010
10011
10012

10012 **Site 28c.**
10013
10014 Date of Cover Measures: 26 January, 2000
10015
10016 Investigators: Burch, S. Durwachter
10017
10018 Community Type: Hydric pine flatwoods.
10019
10020 Indicators of Inundation: Within the sample quadrat area, 10 vascular plant species noted
10021 were Facultative wetland indicator species, and nine vascular plant species noted were
10022 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
10023 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Thirteen
10024 vascular plant species noted were Facultative wetland indicator species, and four vascular
10025 plant species noted were Obligate wetland indicator species on the National List of Plant
10026 Species that Occur in Wetlands (Reed 1998).
10027
10028 Vascular Plant Species Encountered (Total = 34)
10029 Plants listed in the State of Florida Hydric Soil Field Indicators and
10030 National List of Plant Species that Occur in Wetlands are indicated,
10031 respectively, beneath each species as appropriate (see below, Vascular
10032 Plant Species Wetland Community Indicators).
10033
10034 *Amphicarpum muhlenbergianum* blue maidencane
10035 FACW, FACW
10036 *Andropogon virginicus* bluestem
10037 FAC, FAC-
10038 *Cassytha filiformis* love vine
10039 -- , FAC-
10040 *Cirsium horridulum* thistle
10041 -- , FAC+
10042 *Cladium jamaicense* saw grass
10043 OBL, OBL
10044 *Coreopsis leavenworthii* tickseed
10045 FACW, FACW
10046 *Dichanthelium acuminatum* grass
10047 FACW, FAC
10048 *Dichanthelium* sp. grass
10049 *Dichromena colorata* white_top sedge
10050 FACW, FACW
10051 *Elytraria caroliniensis* scalystem
10052 FAC, FACW
10053 *Eragrostis elliottii* grass
10054 FAC, FACW
10055 *Eryngium balduinii* snakeroot
10056 FAC, FACW+
10057 *Eryngium yuccifolium* rattlesnake master
10058 FAC, FAC
10059 *Hypericum brachyphyllum* --
10060 FACW, FACW

10061	<i>Hyptis alata</i>	bush mint
10062	FACW, OBL	
10063	<i>Ludwigia microcarpa</i>	--
10064	OBL, OBL	
10065	* <i>Melochia corchorifolia</i>	chocolate weed
10066	FAC, FAC	
10067	<i>Muhlenbergia capillaris</i>	muhly grass
10068	OBL, FACU	
10069	<i>Myrica cerifera</i>	wax myrtle
10070	FAC, FAC+	
10071	<i>Panicum tenerum</i>	bluejoint panicum
10072	OBL, FACW	
10073	<i>Paspalum monostachium</i>	gulfcoast paspalum
10074	OBL, FACW	
10075	<i>Pinus elliottii</i>	slash pine
10076	FACW, FACW	
10077	<i>Piriqueta caroliniana</i>	stripeseed
10078	<i>Pluchea odorata</i>	fleabane
10079	FACW, FACW	
10080	<i>Polygala grandiflora</i>	candyroot
10081	FACW, --	
10082	<i>Rhynchospora divergens</i>	beakrush
10083	OBL, FACW	
10084	* <i>Schinus terebinthifolius</i>	Brazilian pepper
10085	FAC, FAC	
10086	<i>Scleria</i> sp.	sedge
10087	<i>Serenoa repens</i>	saw palmetto
10088	<i>Setaria geniculata</i>	knotroot bristlegrass
10089	FAC, FAC	
10090	<i>Stillingia aquatica</i>	corkwood
10091	OBL, OBL	
10092	<i>Teucrium canadense</i>	germander
10093	FACW, FACW-	
10094	<i>Xyris</i> sp.	yellow-eyed grass
10095	OBL	
10096		
10097	<u>Other Representative Plants Near, but Not Within Quadrat</u>	
10098		
10099	<i>Chiococca parviflora</i>	snowberry
10100	FAC, --	
10101	<i>Lythrum alatum</i>	loosestrife
10102	OBL, FACW+	
10103	<i>Sabal palmetto</i>	sabal palm
10104	FAC, FAC	
10105	<i>Taxodium distichum</i>	bald cypress
10106	OBL, OBL	
10107	<i>Vitis munsoniana</i>	muscadine grape
10108	--, FAC	
10109		
10110	<u>Cover Measures:</u> Meters of transect line intercepts of vascular plant species within 10m	
10111	X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting	

10112 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
 10113 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 10114 contribute to the tree or shrub canopy layers.

10115

10116

10117 Species: Meters Intercepted

10118

10119 Tree Canopy Exotics

10120 *Pinus elliottii* 1.62

10121 1.62

10122

10123 Shrubs

10124 *Pinus elliottii* 0.32

10125 *Serenoa repens* 0.45

10126 0.77

10127 Epiphytes

10128

10129 Ground Cover

10130 *Amphicarpum muhlenbergianum* 5.62

10131 *Andropogon virginicus* 0.16

10132 *Cassytha filiformis* 0.03

10133 *Cirsium horridulum* 0.06

10134 *Cladium jamaicense* 0.21

10135 *Dichanthelium acuminatum* 0.05

10136 *Dichanthelium* sp. 0.07

10137 *Dichromena colorata* 0.03

10138 *Eryngium baldunii* 0.02

10139 *Eryngium yuccifolium* 0.09

10140 *Ludwigia microcarpa* 0.05

10141 *Muhlenbergia capillaris* 0.08

10142 *Paspalum monostachium* 1.78

10143 *Pinus elliottii* 0.49

10144 *Pluchea odorata* 0.02

10145 *Scleria* sp. 0.05

10146 *Setaria geniculata* 0.01

10147 *Stillingia aquatica* 0.02

10148 *Teucrium canadense* 0.08

10149 *Xyris* sp 1. 0.01

10150 *Xyris* sp 2. 0.01

10151 8.94

10152

10153 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 10154 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 10155 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 10156 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 10157 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

10158

10159 1997

10160		<u>Number of</u>				<u>Percent Cover</u>					
10161		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
10162		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10163	FAC	9(27.3)	6(20.6)			51.5	51.5			2.2	1.1
10164	FW	11(33.3)	13(39.4)	100	100	25.3	25.3			82.4	91.3
10165	OBL	6(18.2)	5(15.2)							14.4	5.5
10166											
10167											
10168	1999										
10169		<u>Number of</u>				<u>Percent Cover</u>					
10170		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
10171		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10172	FAC	9(26.5)	7(20.6)							3.3	2.3
10173	FW	10(29.4)	13(38.2)	100	100	41.6	41.6			70.4	89.9
10174	OBL	9(26.5)	4(11.8)							24.2	3.1
10175											
10176											
10177											
10178		photo not yet available						photo not yet available			
10179											
10180	Site 28c, north of piezometer.					Site 28c, east of piezometer.					
10181											
10182											
10183											
10184											
10185		photo not yet available						photo not yet available			
10186											
10187	Site 28c, south of piezometer.					Site 28c, west of piezometer.					
10188											
10189											
10190											

10190 **Site 29c.**
10191
10192
10193 Site 29c was not available for study.
10194
10195

10195 **Site 30c.**
10196
10197 Date of Cover Measures: 11 November, 1999.
10198
10199 Investigators: Burch
10200
10201 Community Type: Mixed hardwood slough
10202
10203 Indicators of Inundation: Within the sample quadrat area, seven vascular plant species
10204 noted were Facultative wetland indicator species, and 13 vascular plant species noted
10205 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
10206 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Twelve
10207 vascular plant species noted were Facultative wetland indicator species, and 12 vascular
10208 plant species noted were Obligate wetland indicator species on the National List of Plant
10209 Species that Occur in Wetlands (Reed 1998).
10210
10211 Vascular Plant Species Encountered (Total = 34)
10212 Plants listed in the State of Florida Hydric Soil Field Indicators and
10213 National List of Plant Species that Occur in Wetlands are indicated,
10214 respectively, beneath each species as appropriate (see below, Vascular
10215 Plant Species Wetland Community Indicators).
10216
10217 *Acer rubrum* red maple
10218 FACW, FAC
10219 *Annona glabra* pond apple
10220 OBL, OBL
10221 *Blechnum serrulatum* blechnum fern
10222 FACW, FACW+
10223 *Boehmeria cylindrica* false nettle
10224 OBL, FACW+
10225 *Campyloneurum phylitidis* strap fern
10226 *Cornus foemina* Florida dogwood
10227 FACW, FACW-
10228 *Crinum americanum* swamp lilly
10229 OBL, OBL
10230 *Cynanchum scoparium* swallowwort
10231 *Diodia virginiana* button weed
10232 FACW, FACW
10233 *Fraxinus caroliniana* pop ash
10234 OBL, OBL
10235 *Habenaria* sp. orchid
10236 FACW, FACW
10237 *Hippocratea volubilis* medicine vine
10238 --, FACW
10239 *Ilex cassine* dahoon holly
10240 OBL, FACW
10241 *Ludwigia repens* red ludwigia
10242 OBL, OBL
10243 *Mikania cordifolia* hempweed
10244 --, FACW
10245 *Nephrolepis biserrata* sword fern

10246	FAC, FACW-	
10247	<i>Nymphaea odorata</i>	water lily
10248	OBL, OBL	
10249	<i>Parthenocissus quinquefolia</i>	Virginia creeper
10250	--, FAC	
10251	<i>Persea borbonia</i>	red bay
10252	--, FACW	
10253	* <i>Pistia stratiotes</i>	water lettuce
10254	--, OBL	
10255	<i>Polygonum punctatum</i>	smartweed
10256	OBL, FACW+	
10257	<i>Polypodium polypodioides</i>	resurrection fern
10258	<i>Pontederia cordata</i>	pickerel weed
10259	OBL, OBL	
10260	<i>Psychotria sulzneri</i>	wild coffee
10261	FAC, --	
10262	<i>Quercus laurifolia</i>	laurel oak
10263	FACW, FACW	
10264	<i>Rapanea punctata</i>	myrsine
10265	FAC, FAC	
10266	<i>Rhynchospora inundata</i>	horned beakrush
10267	OBL, OBL	
10268	<i>Sagittaria lancifolia</i>	duck potato
10269	OBL, OBL	
10270	<i>Taxodium distichum</i>	bald cypress
10271	OBL, OBL	
10272	<i>Tillandsia fasciculata</i>	air plant
10273	<i>Tillandsia setacea</i>	air plant
10274	<i>Tillandsia variabilis</i>	air plant
10275	<i>Utricularia</i> sp.	bladderwort
10276	OBL, OBL	
10277	<i>Woodwardia virginica</i>	chain fern
10278	FACW, OBL	
10279		
10280	<u>Other Representative Plants Near, but Not Within Quadrat</u>	
10281		
10282	<i>Baccharis halimifolia</i>	salt bush
10283	FAC, FAC	
10284	<i>Ficus aurea</i>	strangler fig
10285	FAC, FACW	
10286	<i>Psychotria nervosa</i>	wild coffee
10287	FAC, --	
10288	<i>Roystonea elata</i>	royal palm
10289	FACW, FAC	
10290	<i>Sabal palmetto</i>	sabal palm
10291	FAC, FAC	
10292	<i>Tillandsia utriculata</i>	air plant
10293		
10294	<u>Cover Measures:</u> Meters of transect line intercepts of vascular plant species within 10m	
10295	X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting	
10296	four randomly selected 10m transects within the sample quadrat. <u>Epiphytes</u> includes true	

10297 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 10298 contribute to the tree or shrub canopy layers.

10299
 10300 Species: Meters Intercepted

10301
 10302 Tree Canopy Exotics
 10303 *Acer rubrum* 3.96
 10304 *Annona glabra* 4.08
 10305 *Cornus foemina* 1.93
 10306 *Fraxinus caroliniana* 2.97
 10307 *Ilex cassine* 0.99
 10308 *Persea borbonia* 1.24
 10309 15.17

10310 Shrubs
 10311 *Annona glabra* 0.16
 10312 *Cornus foemina* 0.03
 10313 *Rapanea punctata* 0.36
 10314 0.55

10315 Epiphytes
 10316 *Campyloneurum phylitidis* 0.01
 10317 *Hippocratea volubilis* 0.05
 10318 *Tillandsia fasciculata* 0.09
 10319 *Tillandsia setacea* 0.07
 10320 0.22

10321 Ground Cover
 10322 *Annona glabra* 0.11
 10323 *Blechnum serrulatum* 4.64
 10324 *Boehmeria cylindrica* 0.05
 10325 *Crinum americanum* 0.17
 10326 *Diodia virginiana* 0.03
 10327 *Ludwigia repens* 2.77
 10328 *Mikania cordifolia* 0.13
 10329 *Nymphaea odorata* 0.44
 10330 **Pistia stratiotes* 0.02 0.02
 10331 *Polygonum punctatum* 0.15
 10332 *Pontederia cordata* 0.15
 10333 8.88 0.02

10334
 10335 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 10336 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 10337 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 10338 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 10339 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

10340
 10341 1997

	<u>Number of</u>			<u>Percent Cover</u>							
	<u>Species</u>			<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>		<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10342											
10343											
10344											
10345	FAC	3(11.1)	4(14.8)		3.5			7.4	92.6	2.1	0.2

10346	FW	5(18.5)	7(25.9)	10.3	19.2	80.0	80.0		7.4	67.5	77.0
10347	OBL	11(40.7)	10(37.0)	89.2	30.0	20.0	20.0			25.6	14.3
10348											
10349	1999										
10350		<u>Number of</u>		<u>Percent Cover</u>							
10351		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
10352		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10353	FAC	3(8.8)	3(8.8)		26.1	65.5	65.5				
10354	FW	7(20.6)	12(35.5)	38.8	27.4	5.5	5.5	22.7		52.6	56.3
10355	OBL	13(38.2)	12(35.3)	53.0	46.5	29.1	29.1			43.2	41.2
10356											
10357											



Site 30c, north of piezometer.



Site 30c, east of piezometer.



Site 30c, south of piezometer.



Site 30c, west of piezometer.

10366 **Site 31c.**
10367
10368 Date of Cover Measures: 14 December, 1999
10369
10370 Investigators: Burch, Hendricks
10371
10372 Community Type: Prairie.
10373
10374 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
10375 were Facultative wetland indicator species, and 12 vascular plant species noted were
10376 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
10377 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Nine
10378 vascular plant species noted were Facultative wetland indicator species, and 12 vascular
10379 plant species noted were Obligate wetland indicator species on the National List of Plant
10380 Species that Occur in Wetlands (Reed 1998).
10381
10382 Vascular Plant Species Encountered (Total = 24)
10383 Plants listed in the State of Florida Hydric Soil Field Indicators and
10384 National List of Plant Species that Occur in Wetlands are indicated,
10385 respectively, beneath each species as appropriate.
10386
10387 *Annona glabra* pond apple
10388 OBL, OBL
10389 *Bacopa caroliniana* hyssop
10390 OBL, OBL
10391 *Cladium jamaicense* saw grass
10392 OBL, OBL
10393 *Crinum americanum* swamp lilly
10394 OBL, OBL
10395 *Cyperus haspan* sedge
10396 OBL, OBL
10397 *Dichanthelium* sp. grass
10398 *Dichondra carolinensis* pony foot
10399 FAC, FACW-
10400 *Dichromena colorata* white_top sedge
10401 FACW, FACW
10402 *Eragrostis elliottii* grass
10403 FAC, FACW
10404 *Erianthus giganteus* plume grass
10405 OBL, FACW
10406 *Eupatorium mikanioides* semaphore eupatorium
10407 FACW, FACW
10408 *Hyptis alata* bush mint
10409 FACW, OBL
10410 *Ipomoea sagittata* morning glory
10411 --, FACW
10412 *Lobelia glandulosa* --
10413 FACW, OBL
10414 *Ludwigia alata* --
10415 OBL, OBL

10416	<i>Ludwigia microcarpa</i>	--
10417	OBL, OBL	
10418	<i>Mikania scandens</i>	hempweed
10419	--, FACW+	
10420	<i>Panicum stipitatum</i>	grass
10421	<i>Panicum virgatum</i>	grass
10422	FACW, FAC+	
10423	<i>Paspalum monostachium</i>	gulfcoast paspalum
10424	OBL, FACW	
10425	<i>Proserpinaca pectinata</i>	mermaid weed
10426	OBL, OBL	
10427	<i>Rhynchospora inundata</i>	horned beakrush
10428	OBL, OBL	
10429	<i>Sagittaria lancifolia</i>	duck potato
10430	OBL, OBL	
10431	<i>Spilanthes americana</i>	creeping spotflower
10432	FACW, FACW	

10433
10434 Other Representative Plants Near, but Not Within Quadrat

10435		
10436	<i>Arundenaria</i> sp	grass
10437	<i>Bumelia celastrina</i>	buckthorn
10438	FAC, --	
10439	<i>Muhlenbergia capillaris</i>	muhly grass
10440	OBL, FACU	
10441	<i>Solidago sempervirens</i>	goldenrod
10442	FACW, FACW	
10443		

10444 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
10445 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
10446 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
10447 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
10448 contribute to the tree or shrub canopy layers.

10449
10450 Species: Meters Intercepted

10451
10452 Tree Canopy Exotics
10453
10454 Shrubs
10455
10456 Epiphytes

10457		
10458	<u>Ground Cover</u>	
10459	<i>Bacopa caroliniana</i>	0.04
10460	<i>Cladium jamaicense</i>	2.59
10461	<i>Crinum americanum</i>	0.50
10462	<i>Eragrostis elliottii</i>	0.02
10463	<i>Erianthus giganteus</i>	0.27
10464	<i>Eupatorium mikanioides</i>	0.04
10465	<i>Hyptis alata</i>	0.06

10466	<i>Ipomoea sagittata</i>	0.01
10467	<i>Ludwigia alata</i>	0.01
10468	<i>Mikania scandens</i>	2.18
10469	<i>Panicum stipitatum</i>	0.09
10470	<i>Paspalum monostachium</i>	4.58
10471	<i>Proserpinaca pectinata</i>	0.17
10472	<i>Sagittaria lancifolia</i>	<u>0.82</u>
10473		11.38

10474

10475 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 10476 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 10477 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 10478 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 10479 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

10480

10481 1997

10482

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10483										
10484										
10485										
10486	FAC	1(5.2)	1(5.2)							0.8
10487	FW	6(31.6)	8(42.1)						9.0	49.2
10488	OBL	9(47.4)	8(42.1)						88.7	48.7

10489

10490 1999

10491

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10492										
10493										
10494										
10495	FAC	2(8.3)	1(4.2)						0.2	
10496	FW	6(25.0)	9(37.5)						1.0	62.4
10497	OBL	12(50.0)	12(50.0)						78.8	36.8

10498

10499



Site 31c, north of piezometer.



Site 31c, east of piezometer.

10500

10501

10502

10503



Site 31c, south of piezometer.



Site 31c, west of piezometer.

10504
10505
10506
10507

10507 **Site 32c.**
10508
10509 Date of Cover Measures:
10510
10511 Investigators:
10512
10513 Community Type:
10514
10515 Indicators of Inundation: Within the sample quadrat area, four vascular plant species
10516 noted were Facultative wetland indicator species, and seven vascular plant species noted
10517 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
10518 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Five
10519 vascular plant species noted were Facultative wetland indicator species, and seven
10520 vascular plant species noted were Obligate wetland indicator species on the National List
10521 of Plant Species that Occur in Wetlands (Reed 1998).
10522
10523 Vascular Plant Species Encountered (Total = 17)
10524 Plants listed in the State of Florida Hydric Soil Field Indicators and
10525 National List of Plant Species that Occur in Wetlands are indicated,
10526 respectively, beneath each species as appropriate (see below, Vascular
10527 Plant Species Wetland Community Indicators).
10528
10529 *Acer rubrum* red maple
10530 FACW, FAC
10531 *Annona glabra* pond apple
10532 OBL, OBL
10533 *Bacopa caroliniana* hyssop
10534 OBL, OBL
10535 *Blechnum serrulatum* blechnum fern
10536 FACW, FACW+
10537 *Boehmeria cylindrica* false nettle
10538 OBL, FACW+
10539 *Cladium jamaicense* saw grass
10540 OBL, OBL
10541 *Crinum americanum* swamp lilly
10542 OBL, OBL
10543 *Ficus aurea* strangler fig
10544 FAC, FACW
10545 *Hyptis alata* bush mint
10546 FACW, OBL
10547 *Myrica cerifera* wax myrtle
10548 FAC, FAC+
10549 *Persea borbonia* red bay
10550 --, FACW
10551 *Pluchea odorata* fleabane
10552 FACW, FACW
10553 *Proserpinaca pectinata* mermaid weed
10554 OBL, OBL
10555 *Sabal palmetto* sabal palm
10556 FAC, FAC

10557	* <i>Schinus terebinthifolius</i>	Brazilian pepper
10558	FAC, FAC	
10559	<i>Taxodium distichum</i>	bald cypress
10560	OBL, OBL	
10561	<i>Tillandsia utriculata</i>	air plant

10562

10563 Other Representative Plants Near, but Not Within Quadrat

10564	<i>Bumelia celastrina</i>	buckthorn
10565	FAC, --	
10566	<i>Smilax auriculata</i>	greenbriar
10567	<i>Vitis munsoniana</i>	muscadine grape
10568	--, FAC	

10569

10570

10571 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 10572 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 10573 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
 10574 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 10575 contribute to the tree or shrub canopy layers.

10576

10577

10578 Species: Meters Intercepted

10579

10580	<u>Tree Canopy</u>	<u>Exotics</u>
10581	<i>Myrica cerifera</i>	0.07
10582	<i>Sabal palmetto</i>	1.38
10583	<i>Taxodium distichum</i>	<u>8.30</u>
10584		9.75

10585 Shrubs

10586

10587 Epiphytes

10588

10589 Ground Cover

10590	<i>Blechnum serrulatum</i>	0.29
10591	<i>Boehmeria cylindrica</i>	0.06
10592	<i>Cladium jamaicense</i>	8.61
10593	<i>Crinum americanum</i>	0.85
10594	<i>Pluchea odorata</i>	0.31
10595	<i>Proserpinaca pectinata</i>	<u>0.11</u>
10596		10.23

10597

10598 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 10599 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 10600 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 10601 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 10602 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

10603

10604 1997

10605 Number of Percent Cover

10606		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
10607		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10608	FAC	4(17.4)	5(21.7)	25.5	25.5						
10609	FW	5(21.7)	7(30.4)		1.2					8.3	8.3
10610	OBL	6(26.1)	6(26.1)	73.3	73.3	100	100			91.4	91.7
10611											
10612											
10613	1999										
10614		<u>Number of</u>		<u>Percent Cover</u>							
10615		<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
10616		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
10617	FAC	4(23.5)	4(23.5)	14.9	14.9						
10618	FW	4(23.5)	5(29.4)							5.9	6.5
10619	OBL	7(41.2)	7(41.2)	85.1	85.1					94.1	93.5
10620											
10621											
10622	Photo not available.										
10623											
10624	Site 32c, north of piezometer.										
10625											
10626											
10627											
10628	Photo not available.										
10629											
10630	Site 32c, south of piezometer.										
10631											
10632											
10633											

10633 **Site 33c.**
10634
10635 Date of Cover Measures: 14 December, 1999.
10636
10637 Investigators: Burch, Hendricks
10638
10639 Community Type: Hydric hammock. The substrate in this area appears to have been
10640 disturbed by feral pigs.
10641
10642 Indicators of Inundation: Within the sample quadrat area, six vascular plant species noted
10643 were Facultative wetland indicator species, and four vascular plant species noted were
10644 Obligate wetland indicator species on the State of Florida Wetland Plant List (State of
10645 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Seven
10646 vascular plant species noted were Facultative wetland indicator species, and three
10647 vascular plant species noted were Obligate wetland indicator species on the National List
10648 of Plant Species that Occur in Wetlands (Reed 1998).
10649
10650 Vascular Plant Species Encountered (Total = 28)
10651 Plants listed in the State of Florida Hydric Soil Field Indicators and
10652 National List of Plant Species that Occur in Wetlands are indicated,
10653 respectively, beneath each species as appropriate (see below, Vascular
10654 Plant Species Wetland Community Indicators).
10655
10656 *Annona glabra* pond apple
10657 OBL, OBL
10658 *Baccharis halimifolia* salt bush
10659 FAC, FAC
10660 *Blechnum serrulatum* blechnum fern
10661 FACW, FACW+
10662 *Carex* sp. sedge
10663 FACW, --
10664 *Chiococca alba* snowberry
10665 FAC, --
10666 *Chrysobalanus icaco* cocoplum
10667 FACW, FACW
10668 *Cladium jamaicense* saw grass
10669 OBL, OBL
10670 *Dichanthelium* sp. grass
10671 *Ilex cassine* dahoon holly
10672 OBL, FACW
10673 *Ludwigia repens* red ludwigia
10674 OBL, OBL
10675 *Mikania scandens* hempweed
10676 --, FACW+
10677 *Myrica cerifera* wax myrtle
10678 FAC, FAC+
10679 *Sabal palmetto* sabal palm
10680 FAC, FAC
10681 *Persea borbonia* red bay
10682 --, FACW

10683	<i>Phlebodium aureum</i>	golden serpent fern
10684	<i>Psychotria nervosa</i>	wild coffee
10685	FAC, --	
10686	<i>Quercus laurifolia</i>	laurel oak
10687	FACW, FACW	
10688	<i>Rapanea punctata</i>	myrsine
10689	FAC, FAC	
10690	<i>Sabal palmetto</i>	sabal palm
10691	FAC, FAC	
10692	<i>Serenoa repens</i>	saw palmetto
10693	<i>Smilax auriculata</i>	greenbriar
10694	<i>Smilax laurifolia</i>	greenbriar
10695	FACW+	
10696	<i>Thelypteris normalis</i>	fern
10697	FACW, FACW	
10698	<i>Tillandsia balbisiana</i>	air plant
10699	<i>Tillandsia fasciculata</i>	air plant
10700	<i>Tillandsia paucifolia</i>	air plant
10701	<i>Toxicodendron radicans</i>	poison ivy
10702	--, FAC	
10703	* <i>Urena lobata</i>	Caesar weed
10704		
10705	<u>Other Representative Plants Near, but Not Within Quadrat</u>	
10706	<i>Berchemia scandens</i>	rattan vine
10707	--, FAC-	
10708	<i>Ficus aurea</i>	strangler fig
10709	FAC, FACW	
10710	<i>Tillandsia utriculata</i>	air plant
10711		
10712	<u>Cover Measures</u> : Meters of transect line intercepts of vascular plant species within 10m	
10713	X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting	
10714	four randomly selected 10m transects within the sample quadrat. <u>Epiphytes</u> includes true	
10715	epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but	
10716	contribute to the tree or shrub canopy layers.	
10717		
10718	<u>Species:</u>	<u>Meters Intercepted</u>
10719		
10720	<u>Tree Canopy</u>	<u>Exotics</u>
10721	<i>Chrysobalanus icaco</i>	0.97
10722	<i>Ilex cassine</i>	1.95
10723	<i>Magnolia virginiana</i>	2.13
10724	<i>Myrica cerifera</i>	1.91
10725	<i>Persea borbonia</i>	1.81
10726	<i>Quercus laurifolia</i>	2.73
10727	<i>Rapanea punctata</i>	0.02
10728	<i>Sabal palmetto</i>	3.48
10729	<i>Taxodium distichum</i>	<u>1.63</u>
10730		16.63
10731	<u>Shrubs</u>	
10732	<i>Baccharis halimifolia</i>	0.05
10733	<i>Chrysobalanus icaco</i>	1.95

10734	<i>Myrica cerifera</i>	0.15
10735	<i>Persea borbonia</i>	0.05
10736	<i>Psychotria nervosa</i>	0.12
10737	<i>Rapanea punctata</i>	0.61
10738	<i>Sabal palmetto</i>	1.45
10739	<i>Serenoa repens</i>	<u>0.45</u>
10740		4.83
10741	<u>Epiphytes</u>	
10742	<i>Smilax auriculata</i>	0.38
10743	<i>Smilax laurifolia</i>	0.49
10744	<i>Tillandsia fasciculata</i>	<u>0.02</u>
10745		0.89
10746	<u>Ground Cover</u>	
10747	<i>Annona glabra</i>	0.03
10748	<i>Baccharis halimifolia</i>	0.04
10749	<i>Blechnum serrulatum</i>	2.41
10750	<i>Carex</i> sp.	0.01
10751	<i>Cladium jamaicense</i>	0.16
10752	<i>Dichanthelium</i> sp.	0.03
10753	<i>Ilex cassine</i>	0.07
10754	<i>Mikania scandens</i>	0.01
10755	<i>Sabal palmetto</i>	0.01
10756	<i>Psychotria nervosa</i>	0.04
10757	<i>Rapanea punctata</i>	0.04
10758	<i>Smilax laurifolia</i>	0.01
10759	<i>Toxicodendron radicans</i>	<u>0.02</u>
10760		2.88

10761

10762

10763 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 10764 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 10765 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 10766 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 10767 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

10768

10769 1997

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed
10773	FAC	7(31.8)	6(27.3)	34.0	34.0	83.8	81.0	82.9	9.3	11.4
10774	FW	3(13.6)	6(27.3)	15.9	61.8	10.8	16.2		82.6	86.0
10775	OBL	3(13.6)	3(13.6)	4.2	4.2				1.5	1.5

10776

10777

10778

10779 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	FL(%)	Fed(%)	FL	Fed	FL	Fed	FL	Fed	FL	Fed

10782

10783	FAC	7(25.0)	6(21.4)	32.5	32.5	52.5	46.8		4.5	3.8
10784	FW	6(21.4)	7(25.0)	27.1	57.7	40.4	41.4	55.1	84.0	86.5
10785	OBL	4(14.3)	3(10.7)	21.5	9.8				9.0	6.6
10786										
10787										



Site 33c, north of piezometer.



Site 33c, east of piezometer.



Site 33c, south of piezometer.



Site 33c, west of piezometer.

Site 34.

Ca. 1.4 km south of US 41, west side of road to abandoned oil pad. This site is not within South Golden Gate Estates, but is west of the main Faka Union canal, and downstream of the area directly affected by the Faka Union drainage system.

Date of Cover Measures: 14 September, 1998.

Investigators: J. N. Burch, G. Hendricks, T. Doyle, H. Yamataki, A. Polizos, D. Addison.

Community Type: Brackish marsh (prairie). This community is part of a wide ecotone that parallels the coastline between the intertidal mangrove forest to the south and west, and the interior fresh water wetlands to the north. This community is dominated by salt tolerant graminoids and herbs that form an incomplete ground cover; exposed substrate is common. Salt tolerant shrubs are common, but not abundant; mangrove trees and small mangrove communities are common. Substrates are mostly organic with little litter; water covers the soil much of the year. No evidence of fire was noted.

Indicators of Inundation: About 0.5 m water covered the site. Within the sample quadrat area, two vascular plant species noted were Facultative wetland indicator species, and three vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Four vascular plant species noted were Facultative wetland indicator species, and one vascular plant species noted was an Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Community Type as Interpreted by Leighty et al. (1954): Tidal marsh, inundated by salt or brackish water much of the year; often affected by tides. Plant communities dominated by salt tolerant graminoids, occasional herbs, and occasional shrubs.

Soil Type (Leighty et al., 1954): Tidal marsh.

Current Detailed Soil Descriptions:

Series: Wulfert

Taxonomic Class: Sandy or sandy-skeletal, siliceous, euic, hyperthermic Terrie Sulfisaprists

Oa1 - 0 to 8 inches; dark reddish brown (5YR 3/2) muck; 30 percent fiber, 5 percent rubbed; massive; friable; many fine and common medium roots; clear wavy boundary.

Oa2 - 8 to 20 inches; very dark gray (5YR 3/1) muck; 10 percent fiber, 1 percent rubbed; massive; very friable; common fine roots; clear wavy boundary.

C1 - 20 to 40 inches; dark gray (10YR 4/1) fine sand; single grained;

10842 loose; gradual wavy boundary.
10843 C2 - 40 to 60 inches; light brownish gray (10YR 6/2) fine sand; single
10844 grained; loose.

10845
10846 Piezometer GPS Location:

10847
10848 UTM Coordinates:

10849	North	East
10850		
10851	2871889	0443843

10852
10853 Quadrat Location: The piezometer is established in the Southeastern corner of the
10854 quadrat area.

10855
10856 Vascular Plant Species Encountered (Total = 6)

10857 Plants listed in the State of Florida Hydric Soil Field Indicators and
10858 National List of Plant Species that Occur in Wetlands are indicated,
10859 respectively, beneath each species as appropriate (see below, Vascular
10860 Plant Species Wetland Community Indicators).

10861		
10862	<i>Cynanchum scoparium</i>	cynanchum
10863	<i>Distichlis spicata</i>	salt grass
10864	OBL, FACW+	
10865	<i>Eleocharis cellulosa</i>	spike rush
10866	OBL, OBL	
10867	<i>Laguncularia racemosa</i>	white mangrove
10868	OBL, FACW+	
10869	<i>Sesuvium portulacastrum</i>	sea purslane
10870	FACW, FACW	
10871	<i>Spartina bakeri</i>	sand cord grass
10872	FACW, FACW+	

10873
10874
10875 Other Representative Plants Near, but Not Within Quadrat

10876		
10877	<i>Cladium jamaicense</i>	saw grass
10878	OBL, OBL	
10879	<i>Conocarpus erectus</i>	buttonwood
10880	OBL, FACW+	
10881	<i>Rhizophora mangle</i>	red mangrove
10882	OBL, OBL	

10883
10884 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
10885 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
10886 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
10887 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
10888 contribute to the tree or shrub canopy layers.

10923

10923



10924

10925 Site 34, north of piezometer.

Site 34, east of piezometer.

10926



10927

10928 Site 34, south of piezometer.

Site 34, west of piezometer.

10929

10930

Site 35.

Ca. 0.3 km south of US 41, west side of road to abandoned oil pad. This site is not within South Golden Gate Estates, but is west of the main Faka Union canal, and downstream of the area directly affected by the Faka Union drainage system.

Date of Cover Measures: 14 September, 1998.

Investigators: J. N. Burch, G. Hendricks, T. Doyle, H. Yamataki, A. Polizos, D. Addison.

Community Type: Brackish to freshwater marsh (prairie). This community is part of a wide ecotone that parallels the coastline between the intertidal mangrove forest to the south and west, and the interior fresh water wetlands to the north. The community at this site is dominated by spike rush (*Eleocharis*) that forms an incomplete ground cover; periphyton and exposed substrate are common. Cat tail (*Typha domingensis*) is common, but not abundant; mangroves occur sparsely. Substrates are mostly 2"-4" marl with little organic material or litter over sand; water covers the soil much of the year. No evidence of fire was noted.

Indicators of Inundation: About 0.5 m water covered the site. Within the sample quadrat area, three vascular plant species noted were Facultative wetland indicator species, and one vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Two vascular plant species noted were Facultative wetland indicator species, and two vascular plant species noted were Obligate wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Community Type as Interpreted by Leighty et al. (1954): Tidal marsh, inundated by salt or brackish water much of the year; often affected by tides. Plant communities dominated by salt tolerant graminoids, occasional herbs, and occasional shrubs.

Soil Type (Leighty et al., 1954): Tidal marsh.

Current Detailed Soil Descriptions:

Series: Peckish

Taxonomic Class: Sandy, siliceous, hyperthermic, Typic Sulfaquents

A1 - 0 to 4 inches; light brownish gray (10YR 6/2) marl; massive but unconsolidated when saturated; weak fine granular structure; very friable; few fine roots; strongly effervescent clear wavy boundary.

A21 4 to 8 inches; dark brown (10YR 4/1) fine sand; single grained; loose; gradual wavy boundary.

E 8 to 50 inches; light brownish gray (10YR 6/2) fine sand; single

10976 grained; loose; gradual wavy boundary.
10977 Bh 50 to 60 inches; brown (10YR 5/3) fine sand; single grained;
10978 loose
10979
10980
10981 Piezometer GPS Location:
10982
10983 UTM Coordinates:
10984
10985 North East
10986 2872657 0444360
10987
10988 Quadrat Location: The piezometer is established in the Southeastern corner of the
10989 quadrat area.
10990
10991 Vascular Plant Species Encountered (Total = 4)
10992 Plants listed in the State of Florida Hydric Soil Field Indicators and
10993 National List of Plant Species that Occur in Wetlands are indicated,
10994 respectively, beneath each species as appropriate (see below, Vascular
10995 Plant Species Wetland Community Indicators).
10996
10997 *Distichlis spicata* salt grass
10998 OBL, FACW+
10999 *Eleocharis cellulosa* spike rush
11000 OBL, OBL
11001 *Sesuvium portulacastrum* sea purslane
11002 FACW, FACW
11003 *Typha domingensis* cat tail
11004 OBL, OBL
11005
11006 Other Representative Plants Near, but Not Within Quadrat
11007
11008 *Conocarpus erectus* white mangrove
11009 OBL, FACW+
11010 *Rhizophora mangle* red mangrove
11011 OBL, OBL
11012 *Spartina bakeri* sand cord grass
11013 FACW, FACW+
11014
11015
11016 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
11017 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
11018 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
11019 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
11020 contribute to the tree or shrub canopy layers.
11021
11022

11023											
11024	<u>Species:</u>									<u>Meters Intercepted</u>	
11025											
11026	<u>Tree Canopy</u>									<u>Exotics</u>	
11027											
11028	<u>Shrubs</u>										
11029											
11030	<u>Epiphytes</u>										
11031											
11032	<u>Ground Cover</u>										
11033											
11034	<i>Distichlis spicata</i>									0.58	
11035	<i>Eleocharis cellulosa</i>									0.99	
11036	<i>Sesuvium portulacastrum</i>									<u>0.01</u>	
11037										1.58	
11038											
11039	<u>Vascular Plant Species Wetland Community Indicators:</u> Vascular plants that indicate										
11040	wetland communities. Listing is from State of Florida Wetland Plant List (State of										
11041	Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and										
11042	National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;										
11043	FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.										
11044											
11045	1998										
11046	<u>Number of</u>										
11047	<u>Species</u>										
11048	<u>FL(%)</u> <u>Fed(%)</u>										
11049	FAC										
11050	FACW 1(25.0) 2(50.0)									0.6	37.3
11051	OBL 3(75.0) 2(50.0)									99.4	62.7
11052											
11053											

11053



11054

11055 Site 35, north of piezometer.

Site 35, east of piezometer.

11056



11057

11058 Site 35, south of piezometer.

Site 35, west of piezometer.

11059

11060

Site 36.

Ca. 1.8 km south of US 41, and 2.2 km east-southeast of the abandoned oil pad. This site is not within South Golden Gate Estates, but is south of the main Faka Union canal, and downstream of the area directly affected by the Faka Union drainage system.

Date of Cover Measures: 15 October, 1998

Investigators: J. N. Burch, G. Hendricks, T. Doyle, H. Yamataki, A. Polizos, D. Addison, T. Doyle

Community Type: Brackish marsh (prairie). This community is part of a wide ecotone that parallels the coastline between the intertidal mangrove forest to the south and west, and the interior fresh water wetlands to the north. This community is dominated by salt tolerant graminoids that form a nearly complete ground cover. Salt tolerant shrubs and mangroves occur, but are not abundant. Substrates are mostly organic with little litter; water covers the soil much of the year. No evidence of fire was noted.

Indicators of Inundation: About 0.5 m water covered the site. Within the sample quadrat area, three vascular plant species noted were Facultative wetland indicator species, and two vascular plant species noted were Obligate wetland indicator species on the State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Five vascular plant species noted were Facultative wetland indicator species on the National List of Plant Species that Occur in Wetlands (Reed 1998).

Community Type as Interpreted by Leighty et al. (1954): Tidal marsh, inundated by salt or brackish water much of the year; often affected by tides. Plant communities dominated by salt tolerant graminoids, occasional herbs, and occasional shrubs.

Soil Type (Leighty et al., 1954): Tidal marsh.

Current Detailed Soil Descriptions:

Series: Wulfert

Taxonomic Class: Sandy or sandy-skeletal, siliceous, euic, hyperthermic Terric Sulfisaprists

Oa1 - 0 to 8 inches; dark reddish brown (5YR 3/2) muck; 30 percent fiber, 5 percent rubbed; massive; friable; many fine and common medium roots; clear wavy boundary.

Oa2 - 8 to 18 inches; very dark gray (5YR 3/1) muck; 10 percent fiber, 1 percent rubbed; massive; very friable; common fine roots; clear wavy boundary.

E1 - 18 to 25 inches; dark gray (10YR 4/1) fine sand; single grained; loose; gradual wavy boundary.

11106 E2 - 25 to 45 inches; light gray (10YR 7/2) fine sand; single
 11107 grained; loose
 11108 Bh - 45 to 60 inches; mixed very dark grayish brown (10YR 3/2) and
 11109 brown (10YR 5/3) fine sand; weak fine subangular blocky structure;
 11110 very friable
 11111
 11112 Piezometer GPS Location:
 11113
 11114 UTM Coordinates:
 11115
 11116 North East
 11117 2869801 0446331
 11118
 11119 Quadrat Location: The piezometer is established in the Southwestern corner of the
 11120 quadrat area.
 11121
 11122 Vascular Plant Species Encountered (Total = 5)
 11123 Plants listed in the State of Florida Hydric Soil Field Indicators and
 11124 National List of Plant Species that Occur in Wetlands are indicated,
 11125 respectively, beneath each species as appropriate (see below, Vascular
 11126 Plant Species Wetland Community Indicators).
 11127
 11128 *Chara sp.* * stonewort
 11129 *Distichlis spicata* salt grass
 11130 OBL, FACW+
 11131 *Laguncularia racemosa* white mangrove
 11132 OBL, FACW+
 11133 *Sesuvium portulacastrum* sea purslane
 11134 FACW, FACW
 11135 *Spartina bakeri* sand cord grass
 11136 FACW, FACW+
 11137 *Sporobolus virginicus* seashore dropseed
 11138 OBL, FACW+
 11139
 11140 * alga commonly found in brackish water
 11141
 11142 Other Representative Plants Near, but Not Within Quadrat
 11143
 11144 *Conocarpus erectus* white mangrove
 11145 OBL, FACW+
 11146 *Eleocharis cellulosa* spike rush
 11147 OBL, OBL
 11148
 11149
 11150 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 11151 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 11152 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true

11153 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 11154 contribute to the tree or shrub canopy layers.

11155

11156

11157 Species: Meters Intercepted

11158

11159 Tree Canopy Exotics

11160

11161 Shrubs

11162 *Rhizophora mangle* 0.01

11163 0.01

11164

11165 Epiphytes

11166

11167 Ground Cover

11168 *Chara sp.* * 0.08

11169 *Distichlis spicata* 2.61

11170 *Spartina bakeri* 6.60

11171 *Sporobolus virginicus* 0.01

11172 9.30

11173

11174 * alga commonly found in brackish water

11175

11176 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 11177 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 11178 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 11179 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 11180 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

11181

11182 1998

<u>Number of</u>			<u>Percent Cover**</u>							
<u>Species</u>			<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
<u>FL(%)</u>	<u>Fed(%)</u>		<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
FAC										
FACW	2 (40.0)	5(100)				100			70.1	100
OBL	3 (60.0)				100				28.2	

11189

11190 ** includes *Chara sp.*

11191

11191



11192

11193 Site 36, north of piezometer.

Site 36, east of piezometer.

11194



11195

11196 Site 36, south of piezometer.

Site 36, west of piezometer.

11197

11198

11198
 11199 **Site 37.**
 11200
 11201 Ca. 1.0 km south of US 41, and 1.7 km east of the abandoned oil pad. This site is not
 11202 within South Golden Gate Estates, but is south of the main Faka Union canal, and
 11203 downstream of the area directly affected by the Faka Union drainage system.
 11204
 11205 Date of Cover Measures: 15 October, 1998
 11206
 11207 Investigators: J. N. Burch, G. Hendricks, T. Doyle, H. Yamataki, A. Polizos, D. Addison,
 11208 T. Doyle.
 11209
 11210 Community Type: Brackish marsh (prairie). This community is part of a wide ecotone
 11211 that parallels the coastline between the intertidal mangrove forest to the south and west,
 11212 and the interior fresh water wetlands to the north. This community is dominated by salt
 11213 tolerant spikerush that form an incomplete ground cover. Periphyton covers much of the
 11214 substrate. Substrates are marl on top of sand; water covers the soil much of the year. No
 11215 evidence of fire was noted.
 11216
 11217 Indicators of Inundation: About 0.5 m water covered the site. Within the sample quadrat
 11218 area, three vascular plant species noted were Obligate wetland indicator species on the
 11219 State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for
 11220 Chapter 62340; Tobe et al. 1998). Two vascular plant species noted were Facultative
 11221 wetland indicator species, and one vascular plant species noted was an Obligate wetland
 11222 indicator species on the National List of Plant Species that Occur in Wetlands (Reed
 11223 1998).
 11224
 11225 Community Type as Interpreted by Leighty et al. (1954): Tidal marsh, inundated by salt
 11226 or brackish water much of the year; often affected by tides. Plant communities dominated
 11227 by salt tolerant graminoids, occasional herbs, and occasional shrubs.
 11228
 11229 Soil Type (Leighty et al., 1954): Tidal marsh.
 11230
 11231 Current Detailed Soil Descriptions:
 11232
 11233 Series: Estero
 11234 Taxonomic Class: Sandy, siliceous, hyperthermic, Typic Haplaquods
 11235
 11236 Oa1- 0 to 3 inches; light brownish gray (10YR 6/2) marl; massive but
 11237 unconsolidated when saturated; weak fine granular structure;
 11238 very friable; few fine roots; strongly effervescent clear wavy
 11239 boundary.
 11240 Oa2- 3 to 5 inches; dark brown (7.5YR 3/2) sapric material; less than 5%
 11241 when rubbed; massive; very friable; abrupt smooth boundary.
 11242 A1 5 to 12 inches; dark brown (10YR 4/1) fine sand; single grained;
 11243 loose; gradual wavy boundary.

11244 E 12 to 42 inches; light gray (10YR 7/2) fine sand; single
 11245 grained; loose; gradual wavy boundary.
 11246 Bh 42 to 60 inches; very dark grayish brown (10YR 3/2) fine sand;
 11247 massive; very friable

11248
 11249 Piezometer GPS Location:

11250

11251 UTM Coordinates:

11252

11253	North	East
11254	2871014	0446055

11255

11256 Quadrat Location: The piezometer is established in the Southwestern corner of the
 11257 quadrat area.

11258

11259 Vascular Plant Species Encountered (Total = 3)

11260 Plants listed in the State of Florida Hydric Soil Field Indicators and
 11261 National List of Plant Species that Occur in Wetlands are indicated,
 11262 respectively, beneath each species as appropriate (see below, Vascular
 11263 Plant Species Wetland Community Indicators).

11264

11265	<i>Chara sp. *</i>	stonewort
11266	<i>Distichlis spicata</i>	salt grass
11267	OBL, FACW+	
11268	<i>Eleocharis cellulosa</i>	spike rush
11269	OBL, OBL	
11270	<i>Sporobolus virginicus</i>	seashore dropseed
11271	OBL, FACW+	

11272

11273 * alga commonly found in brackish water

11274

11275 Other Representative Plants Near, but Not Within Quadrat

11276

11277	<i>Sesuvium portulacastrum</i>	sea purslane
11278	FACW, FACW	
11279	<i>Spartina bakeri</i>	sand cord grass
11280	FACW, FACW+	

11281

11282 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 11283 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 11284 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
 11285 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 11286 contribute to the tree or shrub canopy layers.

11287

11288

11289

11290 Species: Meters Intercepted

11291
11292
11293
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11316
11317
11318
11319

Tree Canopy

Exotics

Shrubs

Epiphytes

Ground Cover

Chara sp. * 0.03
Distichlis spicata 0.10
Eleocharis cellulosa 4.58
4.71

Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate wetland communities. Listing is from State of Florida Wetland Plant List (State of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative; FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

1998

<u>Number of</u>		<u>Percent Cover</u>							
<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
FAC									
FACW	2(100)								100
OBL	2(100)							100	

11319
11320



11321
11322 Site 37, north of piezometer.
11323
11324

Site 37, east of piezometer.



11325
11326 Site 37, south of piezometer.
11327
11328
11329

Site 37, west of piezometer.

11329
 11330
 11331 **Site 38.**
 11332
 11333 This area is ca. km. north of US 41 and ca. km west of the Faka Union canal. This site is
 11334 not within South Golden Gate Estates, but is west of the main Faka Union canal, and
 11335 downstream of the area directly affected by the Faka Union drainage system.
 11336
 11337 Date of Cover Measures: 23 March, 1999
 11338
 11339 Investigators: J. N. Burch, G. Hendricks, H. Yamataki, A. Polizos, D. Addison.
 11340
 11341 Community Type: Prairie. This community is dominated by graminoids with herbs
 11342 common throughout. The area appears to be seasonally inundated, and narrow cypress
 11343 strands occur throughout the area.
 11344
 11345 Indicators of Inundation: Within the sample quadrat area, four vascular plant species
 11346 noted were Facultative wetland indicator species, and five vascular plant species noted
 11347 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
 11348 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Six
 11349 vascular plant species noted were Facultative wetland indicator species, and three
 11350 vascular plant species noted were Obligate wetland indicator species on the National List
 11351 of Plant Species that Occur in Wetlands (Reed 1998).
 11352
 11353 Community Type as Interpreted by Leighty et al. (1954): Prairie with very slow drainage
 11354 or ponded water in nearly level to slightly depressional areas. These are dominated by
 11355 short grasses, sometimes with occasional hatrack cypress, slash pine or other trees.
 11356
 11357 Soil Type (Leighty et al., 1954): Ochopee marl, deep phase.
 11358
 11359 Current Detailed Soil Descriptions:
 11360
 11361 Series: Pennsuco
 11362 Taxonomic Class: coarse silty, carbonatic, hyperthermic Typic Fluvaquents.
 11363
 11364 A1 - 0 to 8 inches; dark gray (10YR 4/1) silt loam; weak medium granular structure;
 11365 friable; many fine roots; few small shells; strongly effervescent; clear wavy
 11366 boundary.
 11367 A2 - 8 to 24 inches; gray (10YR 5/1) silt loam; weak medium granular structure; friable;
 11368 few very fine roots; few small shells; strongly effervescent; clear wavy boundary.
 11369 E - 24 to 36 inches; light gray (10YR 7/1) fine sand; single grained; loose; clear wavy
 11370 boundary.
 11371 Bw - 36 to 42 inches; mixed very pale brown (10YR 7/3) and yellowish brown (10YR
 11372 5/8) fine sand; single grained; loose; clear wavy boundary.
 11373 C - 42 to 48 inches; gray (10YR 6/1) fine sandy loam; weak fine subangular blocky
 11374 structure; friable; abrupt irregular boundary.

11375 R - porous limestone

11376

11377 Piezometer GPS Location:

11378

11379 GPS Coordinates:

11380

11381 North

East

11382 Coordinate

Coordinate

11383

11384 Quadrat Location: The piezometer is established in the Northwestern corner of the

11385 quadrat area.

11386

11387 Vascular Plant Species Encountered (Total = 17)

11388 Plants listed in the State of Florida Hydric Soil Field Indicators and

11389 National List of Plant Species that Occur in Wetlands are indicated,

11390 respectively, beneath each species as appropriate (see below, Vascular

11391 Plant Species Wetland Community Indicators).

11392

11393 *Andropogon virginicus*

bluestem

11394 FAC, --

11395 *Cassytha filiformis*

love vine

11396 *Centella asiatica*

spadeleaf

11397 FACW, FACW

11398 *Cirsium horridulum*

thistle

11399 -- , FAC+

11400 *Cladium jamaicense*

saw grass

11401 OBL, OBL

11402 *Cyperus* sp.

sedge

11403 FACW, --

11404 *Dichanthelium* sp.

grass

11405 *Eragrostis elliottii*

grass

11406 FAC, FACW

11407 *Fimbristylis* sp.

sedge

11408 *Flaveria linearis*

yellowtop

11409 FACW, FACW

11410 *Hymenocallis palmeri*

spider lilly

11411 OBL, OBL

11412 *Muhlenbergia capillaris*

muhly grass

11413 OBL, --

11414 *Paspalum monostachium*

gulfcoast paspalum

11415 OBL, FACW

11416 *Pluchea odorata*

fleabane

11417 FACW, FACW

11418 *Samolus ebracteatus*

pimpernel

11419 OBL, OBL

11420 *Schizachyrium rhizomatum*

south Florida bluestem

11421 FAC, FACW-

11422 unknown herb 1

11423

11424 Other Representative Plants Near, but Not Within Quadrat

11425

11426 *Aletris lutea* colic root

11427 FAC, FACW+

11428 *Asclepias longifolia* milkweed

11429 FACW,

11430 *Baccharis halimifolia* salt bush

11431 FAC, FAC

11432 *Buchnera americana* blueheart

11433 -- , FAC

11434 *Calopogon tuberosus* orchid

11435 FACW, OBL

11436 *Dichromena colorata* white_top sedge

11437 FACW, FACW

11438 *Helenium pinatifidum* sneezeweed

11439 FACW, OBL

11440 *Linum medium* yellow flax

11441 FAC, FAC

11442 *Mitreola sessiliflora* miterwort

11443 FACW, --

11444 *Setaria geniculata* knotroot bristlegrass

11445 FAC, FAC

11446 *Sisyrinchium atlanticum* blue eyed grass

11447 FACW, FACW-

11448

11449

11450 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
11451 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
11452 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
11453 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
11454 contribute to the tree or shrub canopy layers.

11455

11456

11457

11458 Species: Meters Intercepted

11459

11460 Tree Canopy Exotics

11461

11462 Shrubs

11463

11464 Epiphytes

11465

11466 Ground Cover

11467 *Andropogon virginicus* 0.28

11468	<i>Cassytha filiformis</i>	0.04
11469	<i>Centella asiatica</i>	0.10
11470	<i>Cirsium horridulum</i>	0.08
11471	<i>Cladium jamaicense</i>	1.57
11472	<i>Cyperus</i> sp.	0.25
11473	<i>Dichanthelium</i> sp.	0.14
11474	<i>Eragrostis elliottii</i>	0.03
11475	<i>Fimbristylis</i> sp.	0.31
11476	<i>Flaveria linearis</i>	0.20
11477	<i>Hymenocallis palmeri</i>	0.12
11478	<i>Muhlenbergia capillaris</i>	2.84
11479	<i>Paspalum monostachium</i>	0.48
11480	<i>Pluchea odorata</i>	0.02
11481	<i>Samolus ebracteatus</i>	0.07
11482	<i>Schizachyrium rhizomatum</i>	5.26
11483	unknown herb 1	<u>0.01</u>
11484		11.80

11485

11486 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 11487 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 11488 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 11489 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 11490 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

11491

11492 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
11493										
11494										
11495										
11496	FAC	3 (17.6)	2(11.8)						47.0	0.7
11497	FACW	4 (23.5)	6(35.3)						4.8	68.4
11498	OBL	5 (29.4)	2(11.8)						43.1	14.9

11499

11500

11501

11502 SITE PHOTOS NOT AVAILABLE

11503

11503 Site 39.
 11504
 11505 This area is ca. km. north of US 41 and ca. km west of the Faka Union canal. This site is
 11506 not within South Golden Gate Estates, but is west of the main Faka Union canal, and
 11507 downstream of the area directly affected by the Faka Union drainage system.
 11508
 11509 Date of Cover Measures: 23 March, 1999
 11510
 11511 Investigators: J. N. Burch, G. Hendricks, H. Yamataki, A. Polizos, D. Addison.
 11512
 11513 Community Type: Freshwater to brackish marsh (prairie). This area is mostly prairie with
 11514 numerous tree islands. The prairie community is dominated by sawgrass with other
 11515 graminoids and occasional herbs. Many of these plants are found in areas often inundated
 11516 with brackish water. Substrates are organic material over sand. The tree islands occur on
 11517 sandy substrates with ca. 0.5 m greater elevation. These islands are dominated with oaks
 11518 and occasional tropical hardwood shrubs, such as stoppers or indigo berry; slash pines are
 11519 common but not dominant. Shrub layers are frequently dominated by saw palmetto;
 11520 ground cover is generally sparse.
 11521
 11522 Indicators of Inundation: Within the sample quadrat area, three vascular plant species
 11523 noted were Facultative wetland indicator species, and four vascular plant species noted
 11524 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
 11525 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Five
 11526 vascular plant species noted were Facultative wetland indicator species, and five vascular
 11527 plant species noted were Obligate wetland indicator species on the National List of Plant
 11528 Species that Occur in Wetlands (Reed 1998).
 11529
 11530 Community Type as Interpreted by Leighty et al. (1954): Prairie with very slow drainage
 11531 or ponded water in nearly level to slightly depressional areas. These are dominated by
 11532 short grasses, sometimes with occasional hatrack cypress, slash pine or other trees.
 11533
 11534 Soil Type (Leighty et al., 1954): Ochopee marl, deep phase.
 11535
 11536 Current Detailed Soil Descriptions:
 11537
 11538 Series: Pennsuco
 11539 Taxonomic Class: coarse silty, carbonatic, hyperthermic Typic Fluvaquents. (This soil is
 11540 within an area mapped as Kesson muck. It is an acceptable inclusion.)
 11541
 11542 Oa1 - 0 to 8 inches; black (10YR 3/1) muck 30 percent fiber, 5 percent rubbed; massive;
 11543 friable; many fine and common medium roots; clear wavy boundary.
 11544 C1 - 8 to 16 inches; light (10 YR 7/1) silt loam; massive; friable; few very fine roots;
 11545 strongly effervescent; clear wavy boundary.
 11546 C2 - 16 to 40 inches; gray (10 YR 6/1) fine sand; single grained; loose; gradual wavy
 11547 boundary.

11548 C3 - 40 to 80 inches; light gray (10YR 7/1) and white (10YR 8/1) fine sand; single
11549 grained; loose.

11550

11551 Piezometer GPS Location:

11552

11553 GPS Coordinates:

11554

11555 North

East

11556 Coordinate

Coordinate

11557

11558 Quadrat Location: The piezometer is established in the Northwestern corner of the
11559 quadrat area.

11560

11561 Vascular Plant Species Encountered (Total = 13)

11562 Plants listed in the State of Florida Hydric Soil Field Indicators and
11563 National List of Plant Species that Occur in Wetlands are indicated,
11564 respectively, beneath each species as appropriate (see below, Vascular
11565 Plant Species Wetland Community Indicators).

11566

11567 *Aster tenuifolius*

aster

11568 OBL, OBL

11569 *Cladium jamaicense*

saw grass

11570 OBL, OBL

11571 *Crinum americanum*

swamp lily

11572 OBL, OBL

11573 *Hydrocotyle umbellata*

pennywort

11574 FACW, OBL

11575 *Ipomoea sagittata*

morning glory

11576 --, FACW

11577 *Lippia nodiflora*

frog's bit

11578 FAC, --

11579 *Mikania scandens*

hemp vine

11580 --, FACW+

11581 *Myrica cerifera*

wax myrtle

11582 FAC, FAC+

11583 *Panicum tenerum*

blue-joint panicum

11584 --, FACW

11585 *Pluchea odorata*

fleabane

11586 FACW, FACW

11587 *Proserpinaca palustris*

mermaid weed

11588 OBL, OBL

11589 *Solidago* sp.

goldenrod

11590 *Spartina bakeri*

cord grass

11591 FACW, FACW+

11592

11593 Other Representative Plants Near, but Not Within Quadrat

11594

11595	<i>Achrostichum danaeifolium</i>	leather fern
11596	OBL, OBL	
11597	<i>Andropogon glomeratus</i>	bluestem
11598	FACW, FACW+	
11599	<i>Baccharis glomerulifolia</i>	salt bush
11600	FAC, FAC	
11601	<i>Cynanchum scoparium</i>	--
11602	<i>Flaveria linearis</i>	yellowtop
11603	FACW, FACW	
11604	<i>Samolus ebracteatus</i>	pimpernel
11605	OBL, OBL	
11606	<i>Solanum bahamense</i>	canker berry
11607	FACW, --	

11608
11609

11610 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
11611 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
11612 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
11613 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
11614 contribute to the tree or shrub canopy layers.

11615
11616
11617

11618	<u>Species:</u>	<u>Meters Intercepted</u>
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11619

11620	<u>Tree Canopy</u>	<u>Exotics</u>
-------	--------------------	----------------

11621

11622	<u>Shrubs</u>
-------	---------------

11623	<i>Myrica cerifera`</i>	0.03
-------	-------------------------	------

11624

11625	<u>Epiphytes</u>
-------	------------------

11626

11627	<u>Ground Cover</u>
-------	---------------------

11628	<i>Aster tenuifolius</i>	0.01
-------	--------------------------	------

11629	<i>Cladium jamaicense</i>	8.66
-------	---------------------------	------

11630	<i>Crinum americanum</i>	0.16
-------	--------------------------	------

11631	<i>Hydrocotyle umbellata</i>	0.01
-------	------------------------------	------

11632	<i>Ipomoea sagittata</i>	0.06
-------	--------------------------	------

11633	<i>Lippia nodiflora</i>	0.01	0.01
-------	-------------------------	------	------

11634	<i>Mikania scandens</i>	0.38
-------	-------------------------	------

11635	<i>Pluchea odorata</i>	0.64
-------	------------------------	------

11636	<i>Proserpinaca palustris</i>	0.02
-------	-------------------------------	------

11637	<i>Solidago</i> sp.	0.15
-------	---------------------	------

11638	<i>Spartina bakeri</i>	<u>2.06</u>	<u> </u>
-------	------------------------	-------------	---------------

11639		10.26	0.01
-------	--	-------	------

11640

11641 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 11642 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 11643 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 11644 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 11645 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

11646
 11647 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
11650										
11651	FAC	1(7.7)	1(7.7)			100	100		0.01	
11652	FACW	3(23.1)	5(38.5)						20.18	30.6
11653	OBL	4(30.8)	5(38.5)						86.26	86.4

11654

11655

11656

11657 SITE PHOTOS NOT AVAILABLE

11658

11658 Site 40.
11659
11660 Date of Cover Measures 20 July, 1999:
11661
11662 Investigators: G. Hendricks, H. Yamataki, T. Polizos, J. Mayberry
11663
11664 Community Type: Wet prairie. This community is dominated by graminoids with herbs
11665 common throughout. The area appears to be seasonally inundated.
11666
11667 Indicators of Inundation: Within the sample quadrat area, three vascular plant species
11668 noted were Facultative wetland indicator species, and four vascular plant species noted
11669 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
11670 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Five
11671 vascular plant species noted were Facultative wetland indicator species, and one vascular
11672 plant species noted was an Obligate wetland indicator species on the National List of
11673 Plant Species that Occur in Wetlands (Reed 1998).
11674
11675 Community Type as Interpreted by Leighty et al. (1954): Short grass prairie.
11676
11677 Soil Type (Leighty et al., 1954): Ochopee marl, deep phase.
11678
11679 Current Detailed Soil Descriptions:
11680
11681 Series: Pennsuco
11682 Taxonomic Class: coarse silty, carbonatic, hyperthermic Typic Fluvaquents.
11683
11684 A1 - 0 to 5 inches; dark gray (10YR 4/1) silt loam; weak medium granular structure;
11685 friable; many very fine roots; few small shells; strongly effervescent; clear wavy
11686 boundary.
11687 A2 - 8 to 12 inches; gray (10YR 6/1) silt loam; weak medium granular structure; friable;
11688 few very fine roots; few small shells; strongly effervescent ; clear wavy boundary
11689 E - 12 to 30 inches; light gray (10YR 7/2) fine sand; single grained; loose; clear wavy
11690 boundary.
11691 Bw - 30 to 50 inches; mixed very pale brown (10YR 7/3) fine sand; single grained; loose;
11692 clear wavy boundary.
11693 C - 50 to 75 inches; gray (10YR 6/1) fine sand; single grained; loose;
11694
11695 Piezometer GPS Location:
11696
11697 GPS Coordinates:
11698
11699 North East
11700
11701 Quadrat Location:
11702
11703 Vascular Plant Species Encountered (Total = 14)

11704 Plants listed in the State of Florida Hydric Soil Field Indicators and
 11705 National List of Plant Species that Occur in Wetlands are indicated,
 11706 respectively, beneath each species as appropriate (see below, Vascular
 11707 Plant Species Wetland Community Indicators).
 11708

11709	<i>Andropogon glomeratus</i>	bushybeard bluestem
11710	FACW, FACW+	
11711	<i>Andropogon virginicus</i>	bluestem
11712	FAC, FAC-	
11713	<i>Cladium jamaicense</i>	saw grass
11714	OBL, OBL	
11715	<i>Dichanthelium</i> sp.	grass
11716	<i>Dichondra carolinensis</i>	pony foot
11717	FAC, FACW-	
11718	<i>Dichromena colorata</i>	white_top sedge
11719	FACW, FACW	
11720	<i>Euphorbia polyphylla</i>	spurge
11721	FACW, --	
11722	<i>Heliotropium polyphyllum</i>	pineland heliotrope
11723	FAC, FAC	
11724	<i>Muhlenbergia capillaris</i>	muhly grass
11725	OBL, FACU	
11726	<i>Paspalum monostachium</i>	gulfcoast paspalum
11727	OBL, FACW	
11728	<i>Polygala grandiflora</i>	candyroot
11729	FACW, --	
11730	<i>Rhynchospora divergens</i>	beakrush
11731	OBL, FACW	
11732	<i>Schizachyrium rhizomatum</i>	south Florida bluestem
11733	FAC, FACW-	
11734	<i>Scleria</i> sp.	sedge

11735
 11736 Other Representative Plants Near, but Not Within Quadrat
 11737

11738 None noted.
 11739

11740 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 11741 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 11742 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true
 11743 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 11744 contribute to the tree or shrub canopy layers.
 11745

11746		
11747	<u>Species:</u>	<u>Meters Intercepted</u>

11748		
11749	<u>Tree Canopy</u>	<u>Exotics</u>

11750	
11751	<u>Shrubs</u>
11752	

11753 Epiphytes

11754

11755 Ground Cover

11756 *Andropogon glomeratus* 0.28

11757 *Cladium jamaicense* 0.60

11758 *Dichanthelium* sp. 0.20

11759 *Dichondra carolinensis* 0.01

11760 *Euphorbia polyphylla* 0.03

11761 *Heliotropium polyphyllum* 0.08

11762 *Muhlenbergia capillaris* 0.13

11763 *Paspalum monostachium* 0.73

11764 *Polygala grandiflora* 0.01

11765 *Rhynchospora divergens* 1.19

11766 *Schizachyrium rhizomatum* 1.28

11767 *Scleria* sp. 0.02

11768 4.56

11769

11770 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
11771 wetland communities. Listing is from State of Florida Wetland Plant List (State of
11772 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
11773 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
11774 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

11775

11776 1999

	<u>Number of</u>		<u>Percent Cover</u>							
	<u>Species</u>		<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
	<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
11779										
11780	FAC	3(21.4)	1(7.1)						30.0	1.8
11781	FW	3(21.4)	5(35.7)						7.0	76.5
11782	OBL	4(28.6)	1(7.1)						58.1	13.2

11783

11784

11785

11786 SITE PHOTOS NOT AVAILABLE

11787

11787 Site 41.
11788
11789 Date of Cover Measures 20 July, 1999:
11790
11791 Investigators: G. Hendricks, H. Yamataki, T. Polizos, J. Mayberry
11792
11793 Community Type: Disturbed wet prairie. This community is dominated by graminoids
11794 with herbs common throughout. This area was developed for agriculture and
11795 subsequently abandoned several years previous. Drainage ditches and swales are
11796 apparent; ruderal shrubs are common. The area appears to be seasonally inundated.
11797
11798 Indicators of Inundation: Within the sample quadrat area, three vascular plant species
11799 noted were Facultative wetland indicator species, and three vascular plant species noted
11800 were Obligate wetland indicator species on the State of Florida Wetland Plant List (State
11801 of Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998). Six
11802 vascular plant species noted were Facultative wetland indicator species, and one vascular
11803 plant species noted was an Obligate wetland indicator species on the National List of
11804 Plant Species that Occur in Wetlands (Reed 1998).
11805
11806 Community Type as Interpreted by Leighty et al. (1954): Short grass prairie.
11807
11808 Soil Type (Leighty et al., 1954): Ochopee marl, deep phase.
11809
11810 Current Detailed Soil Descriptions:
11811
11812 Series: Pennsuco
11813 Taxonomic Class: coarse silty, carbonatic, hyperthermic Typic Fluvaquents.
11814 A1 - 0 to 5 inches; dark gray (10YR 4/2) silt loam; weak medium granular structure;
11815 friable; many very fine roots; few small shells; strongly effervescent; clear wavy
11816 boundary.
11817 A2 - 5 to 25 inches; gray (10YR 6/1) silt loam; weak medium granular structure; friable;
11818 few very fine roots; few small shells; strongly effervescent ; clear wavy boundary
11819 E - 25 to 40 inches; light gray (10YR 7/1) fine sand; single grained; loose; clear wavy
11820 boundary.
11821 Bw - 40 to 50 inches; mixed very pale brown (10YR 7/3) and yellowish brown (10YR
11822 5/8) fine sand; single grained; loose; clear wavy boundary.
11823 C - 50 to 75 inches; gray (10YR 6/1) fine sand; single grained; loose.
11824
11825 Piezometer GPS Location:
11826
11827 GPS Coordinates:
11828
11829 North East
11830 Coordinate Coordinate
11831

11832 Quadrat Location: The piezometer is established in the Southwestern corner of the
 11833 quadrat area.
 11834
 11835 Vascular Plant Species Encountered (Total = 11)
 11836 Plants listed in the State of Florida Hydric Soil Field Indicators and
 11837 National List of Plant Species that Occur in Wetlands are indicated,
 11838 respectively, beneath each species as appropriate (see below, Vascular
 11839 Plant Species Wetland Community Indicators).
 11840
 11841 *Cladium jamaicense* saw grass
 11842 OBL, OBL
 11843 *Dichanthelium* sp. grass
 11844 *Dichondra carolinensis* pony foot
 11845 FAC, FACW-
 11846 *Erianthus giganteus* plume grass
 11847 OBL, FACW
 11848 *Flaveria linearis* yellowtop
 11849 FACW, FACW
 11850 *Heliotropium polyphyllum* pineland heliotrope
 11851 FAC, FAC
 11852 *Muhlenbergia capillaris* muhly grass
 11853 OBL, FACU
 11854 *Paspalum monostachium* gulfcoast paspalum
 11855 OBL, FACW
 11856 *Pluchea odorata* fleabane
 11857 FACW, FACW
 11858 *Polygala grandiflora* candyroot
 11859 FACW, --
 11860 *Schizachyrium rhizomatum* south Florida bluestem
 11861 FAC, FACW-
 11862
 11863 Other Representative Plants Near, but Not Within Quadrat
 11864
 11865 *Andropogon glomeratus* bushybeard bluestem
 11866 FACW, FACW+
 11867 *Baccharis halimifolia* salt bush
 11868 FAC, FAC
 11869 **Melaleuca quinquenervia* cajepit
 11870 FAC, FAC
 11871 *Phragmites australis* reed
 11872 OBL, FACW
 11873 *Sabal palmetto* sabal palm
 11874 FAC, FAC
 11875 **Schinus terebinthifolius* Brazilian pepper
 11876 FAC, FAC
 11877
 11878 Cover Measures: Meters of transect line intercepts of vascular plant species within 10m
 11879 X 10m quadrats. Measures are mean measures (meters) of vascular plants intercepting
 11880 four randomly selected 10m transects within the sample quadrat. Epiphytes includes true

11881 epiphytes (e. g., orchids, bromeliads), and vines that may originate on the ground, but
 11882 contribute to the tree or shrub canopy layers.

11883

11884

11885 Species: Meters Intercepted

11886

11887 Tree Canopy Exotics

11888

11889 Shrubs

11890

11891 Epiphytes

11892

11893 Ground Cover

11894

11895 *Cladium jamaicense* 2.16

11896 *Dichantheium* sp. 0.05

11897 *Dichondra carolinensis* 0.01

11898 *Erianthus giganteus* 0.20

11899 *Flaveria linearis* 0.94

11900 *Heliotropium polyphyllum* 0.04

11901 *Muhlenbergia capillaris* 2.93

11902 *Pluchea odorata* 0.16

11903 *Polygala grandiflora* 0.15

11904 *Schizachyrium rhizomatum* 0.63

11905 7.27

11906

11907 Vascular Plant Species Wetland Community Indicators: Vascular plants that indicate
 11908 wetland communities. Listing is from State of Florida Wetland Plant List (State of
 11909 Florida Hydric Soil Field Indicators, lists for Chapter 62340; Tobe et al. 1998) and
 11910 National List of Plant Species that Occur in Wetlands (Reed 1998). FAC = facultative;
 11911 FACW = facultative wet; OBL = obligate. FL = State of Florida list, Fed = Federal list.

11912

11913 1999

	<u>Number of</u>			<u>Percent Cover</u>							
	<u>Species</u>			<u>Trees</u>		<u>Shrubs</u>		<u>Epiphytes</u>		<u>Ground Cover</u>	
		<u>FL(%)</u>	<u>Fed(%)</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>	<u>FL</u>	<u>Fed</u>
11915											
11916											
11917	FAC	3(27.3)	1(9.1)							9.8	0.5
11918	FW	3(27.3)	6(54.5)							17.2	26.7
11919	OBL	4(36.4)	1(9.1)							72.8	29.7

11920

11921

11922

11923 SITE PHOTOS NOT AVAILABLE